

Principles to stand out - straight from the people running the developer hiring process

THE TECH RESUME INSIDE-OUT

What a good developer resume looks like and how to write one

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With insights from hiring managers and tech recruiters at Google, Facebook and other tech companies

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⚠ Under Construction ⚠

This book is still under development. As part of the Beta process, I am releasing this copy well before a normal guide would be released. This way, you are able to get this content several weeks before it's available in its finished form, and I get feedback to make the book even better. This way, we both win!

Warning: the book has not yet had a full content edit, so it will contain errors and incorrect statements. It has not been copyedited, so you will see typos and incorrect grammar. Layout editing has also not been done, meaning pages will break at unexpected places. You'll also find other parts that you would not expect with a production-ready guide. Despite this, I hope you'll still find this early release valuable.

Please, send me feedback with suggestions, corrections, typos and missing parts at techresume@pragmaticengineer.com. Thank you, and enjoy the guide!

1. Introduction

There's a myth of it being easy to get a job as a developer. While there are times where this might be true - especially if you are a senior or staff software engineer working at FAANG¹ or other hot tech companies - this is not the case for most devs. As soon as you get out on the job market and start directly applying for jobs, the feeling of having it easy quickly disappears.

The COVID-19 reality is also setting in. As of May 2020, many software developers have been laid off, all while there are fewer companies hiring for fewer engineering positions. This results in what will likely be the most competitive market to land a software development job since the dotcom bust in 2001. In this market, there will be more cold applications via resumes to advertised developer positions than ever before.

This guide will help you craft a developer resume that represents you fairly, plays to your strengths and one that increases your chances of getting to that recruiter call.

Who This Guide is For

This guide is tailored for people applying for developer jobs with English-as-a-main-language large tech companies in the US, Europe, and India. The guide is especially relevant for companies with US headquarters: FAANG, unicorns and fast-growing tech startups. The principles of the guide likely translate to other companies. However, different industries and different companies might follow different processes, and look for different things in a resume.

Everything presented in this guide are opinions that might, or might not apply to the country and industry you are applying in, or the company you are applying to. Make sure to do your own research and get feedback from your network to tailor your CV. There is no "one size fits all" approach.

Why Resumes and CVs are Important

I have reviewed over a thousand resumes the past few years - or, as they call them in Europe and several countries, CVs. As a hiring manager, I glanced through most of these, making a short decision on whether to proceed. And for a week, I carefully reviewed more than 300 resumes, spending 10-15x as much time as a recruiter or hiring manager would. These were resumes for senior engineers, mid-level and new grads, who put time and effort into building what they thought was a good resume. And the results were surprising.

The majority of developer resumes I have seen did a poor job representing the person behind the profile. As a hiring manager in a hurry, with more than a hundred resumes to go through, I would have passed on many of the otherwise strong and qualified candidates. And this was because their potential did not come across on the resume. Recruiters, who often are less technical, would have passed on even more of them.

¹ FAANG: Facebook, Apple, Amazon, Netflix, Google. FAANG companies are known for the impressive stock growth they have shown in recent years. Engineers working at these companies receive hefty equity compensation on top of base salaries, making them some of the most attractive companies to work at - and the most competitive to get into.

You write a resume when you are *proactively* applying for a company: when you are actively searching for a job. Especially for experienced developers, this might be a new reality in the COVID-19 situation. Until now, many people with strong LinkedIn profiles got inbound messages, being hunted down for positions. But as tech companies scale back on hiring, and several other places lay off developers, the market where developers were rare is turning into a market where there is no shortage of developers. Instead of recruiters going after developers, developers are now applying directly.

And when you apply directly, you want a resume that represents you well, on the first glance. If you don't put in the time and effort, don't be surprised if you'll be passed on for someone who is just as qualified, but has a resume that sells them better for that specific position.

Good Resumes, Great Resumes

Good resumes are ones that represent you in the fairest possible way, maximizing your chances of getting through the resume screening process - assuming you are qualified. However, even with a good resume, you won't get a recruiter all the time. This could be for a variety of reasons. The main one being that sometimes your profile won't match what companies are looking for, or there might be stronger profiles. However, with a good tech resume, you won't miss opportunities due to not representing yourself well enough.

Great resumes are ones where you grab the attention of the recruiter or the hiring manager, and they immediately want to talk to you. Unfortunately, this has little to do with the format, and all to do with the content and format. Great tech resumes are ones that showcase rare and valuable experience or skills. If you happen to be a senior software engineer at Google, and you apply directly to a small company that sees very few applications, the recruiter won't believe their luck.

Great tech resumes are built on the years of experience you gather that make you stand out from the crowd of software engineers, industry-wide. This guide will not help you with that. However, it will help you craft a good tech resume: one that will increase your chances of getting your foot in the door of a company, where you can level up, before moving to the next one to level up... until you have the skills and experience for a Great Tech Resume.

Does “engineering at Google” make for a great resume? Not always.

Out of the hundreds of developer resumes I reviewed, a particular one stood out. This resume was from someone who spent a combined five years at Apple and Google before moving over to a small company. And yet, they reached out to me, as they were not getting many interviews and couldn't find out why.

True, the resume caught my eye, just like every recruiter's eye, so I read it in detail. But with every paragraph, my initial excitement faded. The resume painted the picture of someone who did mediocre work at the current, small company. They highlighted examples of challenging, but unfinished work, linking to barely working web prototype, which seemed like anyone could whip together in a matter of weeks. Reading further, there was very little mention of the specifics of the work at Google or Apple. Even what was written was making it seem like they only played episodes on internal projects at Google and Apple.

This person might have still gotten interviews, had they not been interviewing in the Valley, where Google and Apple are well-regarded, but the name itself won't always get you through the door. The resume also needs to sell you: and this resume did no selling: it only did underselling.

After talking with this person, and understanding what they really did, we reworked their resume to reflect their actual work. The updated resume was what I'd call a Great Tech Resume - and the interviews kept flooding in. While it's not exactly hard with this kind of experience, it's a reminder that presentation and storytelling do matter even when you have “Google”, or something similarly eye-catching on your resume.

The COVID-19 Job Market

With the pandemic, the tech job market is going through faster changes than we've seen in the decade before. More people at all levels are losing their jobs in tech and looking for new positions. Suddenly, the talent pool for local and qualified developers - from mid-level to senior and above - has increased. What used to be a developer's market is turning into an employer's market.

Until the pandemic is over, I am expecting to see companies sponsoring fewer visas, as they can now both hire qualified people locally, or advertise remote positions. For remote positions, the competition will increase multiple times, as now most developers know - and many prefer - to work remotely.

This will make it harder for everyone to get a job. Preparation and persistence will make a difference. Even so, just having a great resume won't be enough: it is just the first step. You need to stand out with your skills and experience between other applicants. Getting into your dream companies will be tougher than it has ever been - applying to smaller and more local companies where you are the one standing out can also be a sensible strategy to pursue.

The fact that you are reading this guide shows that you are ready to put in the work for preparing. You'll also have to stay positive, focused, and be creative during this time to secure your next role in an environment that's tougher than any time since the dot-com bust in 2001.

A Resume Is Not Enough

"I have been applying to Facebook in London, Stripe in New York, and Snap in LA. I haven't heard back in either cases. Can you help me fix my resume so I get an interview?"

I have gotten several of these types of questions, where people think that the format of their resume is the only thing that is getting in the way of getting that recruiter call. Unfortunately, it's more than this.

A well-written resume is required, but it is not sufficient to get a recruiter call. There are several other factors that are outside your control. These include:

- **If the position is still open.** The position you submit your application to might have already been filled - without you knowing about it.
- **Your competition.** You might think you have a strong profile, but what if there are dozens of people with more experience, with stronger skills applying for the same position? You won't get an interview. Also, for remote-friendly and remote-only jobs, the competition will be far more intense.
- **Being local vs needing relocation.** If a position sees hundreds of applications, the local candidates might get preference. They won't need relocation, which means they could start faster. Also, the lack of relocation makes this cheaper for the company.
- **Your visa status.** When a company has to apply for a visa for you to work in the country, this takes time and money. Companies usually only sponsor visas for senior positions, where they cannot find candidates without needing visas, reliably. Even many of the big tech companies only sponsor visas for senior or above positions.
- **Your seniority.** Certain positions only look for people with certain seniority - even if they do not advertise this externally. You might be considered not having enough experience for a position. This is frequently the case when you are a new grad, or have less than two years' of experience, applying for positions that do not consider people without a few years of industry work behind their back. In more rare cases, the recruiter might decide you seem to be overqualified for the position, with all your experience.
- **Luck.** Blind chance also plays a role, especially when your resume competes with hundreds of others. There are ways to make luck less of a factor - see section 2.1 on referrals, which can make the biggest difference in eliminating this factor, and getting to a recruiter screen.

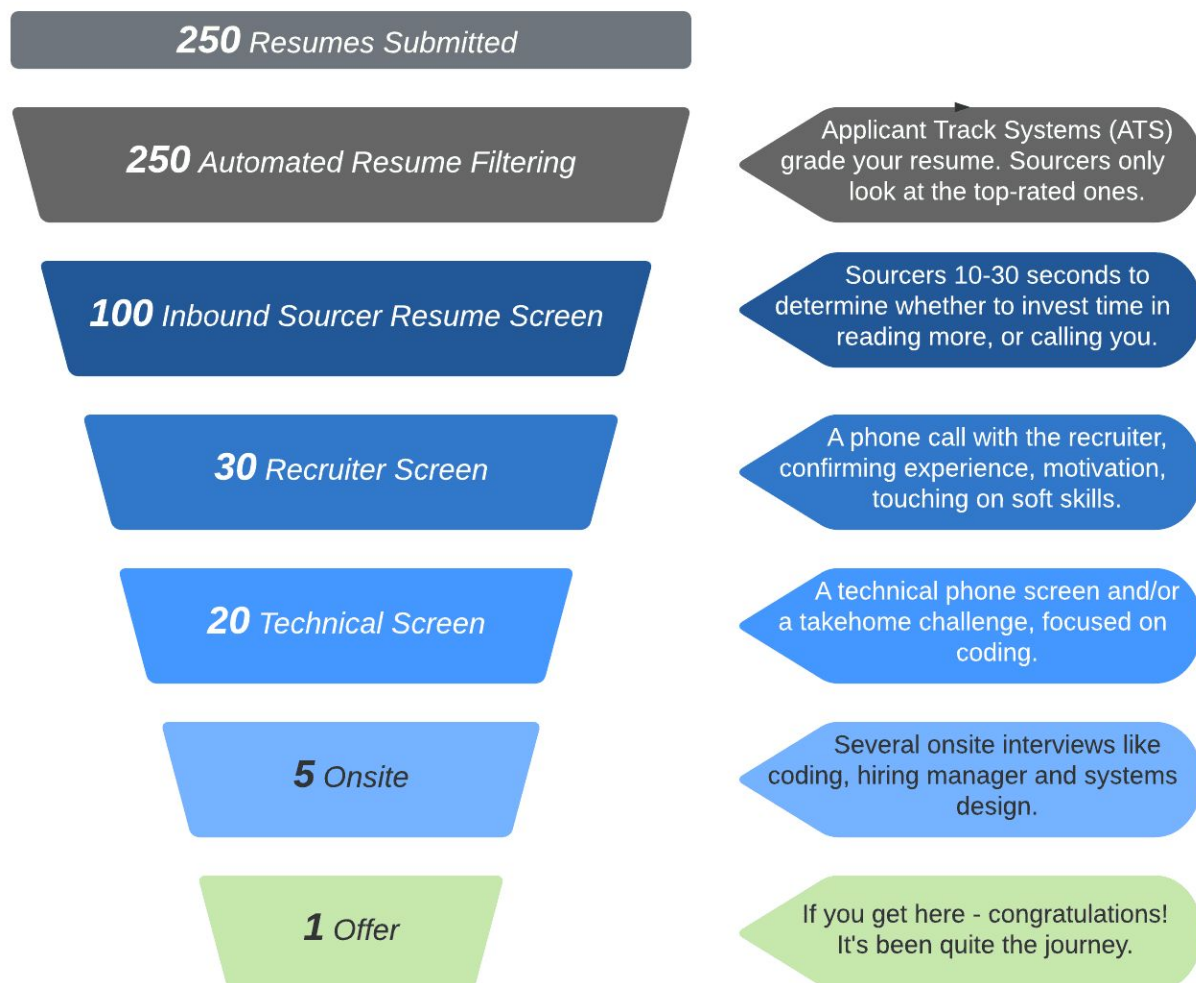
2. The Hiring Pipeline

Let's look at the bigger picture of how the interview process looks like to better understand why resumes are important. This process can often seem like a black hole. It could also feel like a hard-to-predict series of interactions with people until you - hopefully - get an offer.

Hiring managers and recruiters look at this process quite differently and call it the Hiring Pipeline. Why this name? It's because at every stage, there's a significant dropoff in the number of candidates still in the pipeline.

The Typical Hiring Pipeline

When you submit your resume through a job advert, the typical hiring pipeline is similar across all tech companies. There's a resume screen, a recruiter screen, a technical screen and a series of onsite interviews. You could get rejected at each round - or, if you did well, progress until you get an offer. Here is how this hiring pipeline could look, visualized:



Let's look at each of the stages:

1. **Automated resume filtering.** Most large companies use Applicant Tracking Systems (ATS) automatically scan your resume and grade them on a score of 0 to 100 based on keywords, phrases, and machine learning. Only the top ranked CVs will be looked at by a sourcer.
2. **Inbound sourcer CV screen.** Inbound sourcers are specialized roles at big companies. They are recruiters who are responsible for going through applications submitted by candidates on the job site. They scan your resume, spending 10-30 seconds to determine if you might be a match for the position. If you're not a good match, you might get an automated rejection message - assuming the company has a policy to send one. If the first scan is promising, they'll spend a bit more time reading your resume in depth. Afterwards, they might set up an initial call to double click on a few details, and determine if they'll have you start the interview process.
3. **Recruiter screen.** Only profiles who look promising to be a fit for the job make it to the recruiter screen. This is a phone call with the recruiter, confirming experience, motivation, and touching on soft skills.
4. **Technical screen.** A technical phone screen and/or a takehome challenge focused on coding. Candidates almost always interact with software engineers at the company at this point.
5. **Onsite interview.** Several (remote) onsite interviews such as coding, hiring manager and systems design (this one for more experienced candidates)
6. **Offer.** It is not rare for each actual offer starting with a hundred or more seemingly qualified CVs. If you do get an offer, massive congratulations - you probably had little clue until now just how competitive this process was.

The COVID-19 hiring pipeline: what hiring managers say

Talking with several hiring managers at small, medium and large companies, those companies hiring are seeing an unusually large spike in applications. Far more people are applying to the currently open developer jobs, than it has been the case the previous years. Here are a few quotes from hiring managers:

"I saw 100 applications per day for a role I posted. I work at a well-known tech company, but this is beyond anything we expected."

"I just looked at our ATS and we've had more than 200 applications in less than a month for the 1 role I'm hiring for. This is about 20-30x the normal applications rate."

"I've had one role open on my team for 2.5 months and I have more than 2,000 applications now. This is easily 20x what we'd normally see."

"We are getting 80 applications per day across 4 roles. It is getting very difficult to manage, and I've not experienced anything like this before."

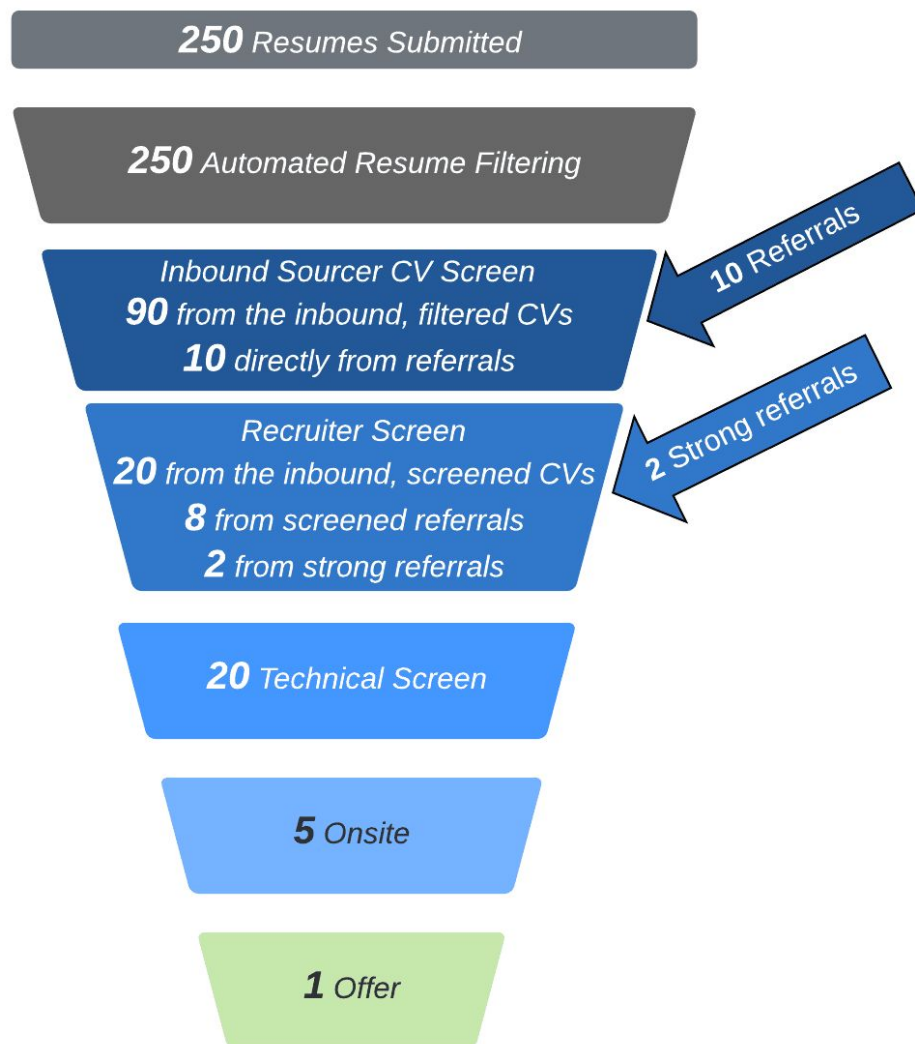
With applications at an unprecedented level, tailoring your resume for the position, making and catching the recruiter's attention in the first scan are both key. Even more so are referrals. Let's talk more about these.

Why Referrals are Important

If you are surprised at how difficult getting even to a recruiter screen is, I have good news, and I have bad news. The good news is that referrals make this much more easier - if you have one. The bad news is that without a referral, it's actually more difficult to even have a human look at your resume or to get a recruiter call.

Referrals - short for employee referrals - are ways for employees to internally refer candidates. Pretty much all tech companies have a referral program that incentivizes employees to make referrals and rewards them for successful referrals. When their referral is hired, employees are paid a nice bonus, often in the thousands of dollars. Referrals are treated with priority because they work remarkably well. Referrals are far more likely to go through interviews successfully, to get an offer, and to accept an offer. They are also less likely to turn out to be a bad hire, who don't make it through their trial period. Studies like [Understanding the value of hiring through referrals](#) and [The value of hiring through employee referrals in developed countries](#) confirm this to be the case not just within tech, but for hiring, in general.

Let's revisit the hiring pipeline to see how referrals change your chances of getting noticed. I'm differentiating between a very generic employee referral, and between a "strong" referral. A generic employee referral could be an employee working at a company who you don't know personally, but after reaching out to them and asking for a referral, they referred you with your resume. A "strong" referral would be someone who works at the company who you have worked with, and they actively vouch for you.



Referrals allow you to completely sidestep the automated resume filtering and have a human look at your resume, the very least. In many cases, you'll also make it to the recruiter call easier, thanks to the referral. For strong referrals, you might have a recruiter call setup straight up.

So how do you get a referral? You ask for it.

- **Check your network** if someone you know happens to work at the company you are applying to.
- **See if you have second-degree connections on LinkedIn**, where someone you know is connected with another person, who works at the company. See if you can ask for an introduction to get a referral.
- **Cold outreaches for referrals on LinkedIn** can also work. It's less likely to work than when you have a shared connection, but it can mean a large boost, compared to not having any referral. If you send a LinkedIn connection request, be sure to add a clear and concise message in the request on you looking for a referral.

- **Consider asking for a referral** for well-known tech companies, c on [Blind](#). Blind is an anonymous professional network for people working at larger companies, and it is common for people to ask for referrals. When you do, make sure to tag the company name, include your LinkedIn profile, describe why you think you are a good fit for the job, and link the job description as well.

If you ask for a referral, do this before you apply to the position. Most tech companies have referral systems, where employees are only eligible to refer candidates who are not yet in the hiring pipeline. This means that if you apply directly on the company's website, then ask for a referral, you often won't be able to get referred. This is because you will be considered an active candidate, your email and resume are already in the system. It can be a delicate balance on how long you wait to apply, versus getting a referral: you'll need to make the call if you want your application to go in faster, or to wait, and have it come with a referral, assuming you can get one.

Referrals: what developers working at tech companies say

I reached out to hiring managers and engineers working at tech companies, asking them how important they see referrals at their company. These quotes are not representative of the company, but they do show that even blind referrals can help.

Facebook: *"With a referral, you are 10x as likely to get an interview. If you are a borderline hire and your referral has worked with you, and they can vouch for you technically and professionally, it can turn a "maybe" into a yes. I've seen it happen before."*

Google: *"Almost all people I've referred, even without knowing them, have gotten an interview. Beyond that, cold referrals don't help. Referrals, where the person has worked with you and has good enough knowledge of your work can help you get an offer, though."*

Amazon: *"A blind referral can get you a phone interview with a recruiter - this is what happened in my case, at least."*

Microsoft: *"A referral can get you an interview faster, but it doesn't help you get an offer."*

Uber: *"It almost certainly gets you a response from the recruiter. If the person referring you knows you well, they might also ping the recruiter or hiring manager directly, increasing the chance for a recruiter call the very least."*

Netflix: *"We usually only give referrals to people we know well - blind referrals are not a thing that I've seen."*

Tumblr: *"A referral gets your resume and your application fast-tracked to the recruiter, but that's about it."*

3. Tech Resume Basics

How you can optimise for the first glance. Basic principles from simplicity, consistency and how to avoid unnecessary biases.

The First Glance

Recruiters want to collect a few key pieces of information at first glance: and it is in your best interest to make this easy. If recruiters can't find this information, and there's lots of resumes to go through, they might move on to the next one. The key pieces of information are these:

1. **Years of experience.** The first thing they'll scan for is how long have you been working for. The recruiter will then mentally compare you to the internal level of the position - which is not always advertised. Say the position is for an L4 position at Facebook, Google or Uber, which is an SDE2 - a level above the entry-level engineer. This is someone with usually 3-5 years experience, give or take. The recruiter will quickly scan to the education section to confirm your graduation date - may this be university, bootcamp or something else - then subtract how much time has passed. If you make this information hard to find or it's unclear - you might end up in the reject pile, the same way as if you don't have sufficient years to warrant a hire.
2. **Relevant technology skills.** For the technology the position is recruiting for, how much relevant experience do you have? So e.g. if applying for a backend position for a company that mostly uses Java and Go, the recruiter would want to scan and see if they see Java or Go, and with what proficiency. If there are fewer applicants or the screener is thorough, they might go deeper and assume that if you have several other languages, you could pick these up quickly: but don't count on this.
3. **Work experience.** How much relevant work experience do you have? Do you come across as someone who has *consistently* delivered impact?
4. **Work authorization and visa status (when applying from abroad).** If your application seems like it's from abroad, do you already have work authorization? If not, what kind of visa would you need to get to be able to work for the company? Your application can seem like it's from abroad based on your contact details, the location of your last work or study experience, or even on your name. When you already have work authorization or a valid work visa, you'll want to add this clearly in any of these cases - else the recruiter might put your resume in the "needs visa" pile, prioritizing it only after they have reviewed local candidates.
5. **Anything that clearly stands out.** Anything that pops out on the first page of your CV. For new grads, this could be your school - if it's a well known one - or an award. For more experienced people it could be your company, a patent, a PhD, being a core contributor to a relevant open source product or something that is rare to see among the hundreds of profiles.

So how do you make this information stand out? You make sure most information is on the first page, and you use clear formatting, and good use of colors and bolding to draw attention to the relevant parts.

Ground Rules

Your resume should be two pages or less and contain basic contact details. Use good grammar and no typos, make dates easy to read, and don't include photos or other non-required information.

There are a few things that all resumes need to follow to be considered professional-looking resumes, in tech. These are the things that "go without saying" - and because of this, they are rarely written down. Make sure your resume follows every one of these:

1. **Good grammar and NO typos.** Typos and poor grammar on a resume come across as not having attention to detail and/or not having good control of the language. It will easily have your resume ignored. Use free spell checking tools, grammar checking like [Grammarly](#) and ask someone else to re-read your CV for correctness. The same applies to punctuation: ensure this is consistent across your resume.
2. **Basic contact details.** Include your email address and relevant contact information, like phone number and the city and country where you are a resident, at the top. Keep this short and don't take up too much space with these. You don't need to add your full mailing address as contact details: no one will send you a letter in the mailbox based on your resume. Should you later get an offer, you'll be asked for all your personal details: but that's a long way ahead.
3. **Dates in reverse chronological order.** Mark your work and education experiences clearly with dates. List them with the latest one on the top, listing out earlier ones underneath.
4. **Don't include photos or non-required personal information** like your date of birth, gender, citizenship, relationship information, number of children, religion, or others. See section TODO for more details on the biases this creates.

Two pages or less: this last one is not a strict rule, but a very wise one to follow. Aim to not go over this length: I've seen little reason to do so. For new grads, fit in on one page. If you have less than a few years of experience, it's not expected you fill in the second page.

Simplicity and Consistency

For people to read what you write, it [needs to be written well](#). This applies to resumes as well. Resumes that are simple, concise, and are easy to read will be read more. Hiring managers and recruiters will, at most skim ones that are cluttered and overly verbose. To make your resume simple and concise, follow these principles.

1. **Clear, neat, and consistent formatting.** Use the same formatting throughout the resume. Use the consistent font sizes and make the resume easy to scan through in a glance. TODO - see the templates section for a good template.
2. **Good grammar and NO typos.** Did you notice the typo on "tpyos"? Typos and poor grammar on a resume come across as not having attention to detail or not having good control of the language. It will easily have your resume ignored. Use spell checking tools, grammar checking like [Grammarly](#) and ask someone else to re-read your CV for correctness. The same applies to punctuation: ensure this is consistent across your resume.

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3. **Bullet points for easy readability.** Use bullet points that make the CV easier to read. Avoid paragraphs. Recruiters in tech companies are used to scanning bullet points - they are less effort to read.
 - Sub-bullet points: avoid. They clutter your resume, make it more verbose, and make it harder to read. If you find yourself using these, re-edit your resume and stick with one level.
 - Using dashes for bullet points, to save space: also avoid. They look out of place and are harder to read than bullet points.
 4. **Dates: use consistent and easy to read formats.** A date like "06/11 - 07/12" is hard to understand. The reviewer now needs to think, "is the first date June 2011 or November 2006?". Just write "June 2011 - July 2012". Now they don't need to think, and the year clearly stands different from the month. For any date span longer beyond a few years, you can also drop the exact month as it becomes irrelevant, especially when it is a date that is more than four-five years ago.
 5. **PDF format.** Use this format and no other. Avoid formats like .doc, .rtf - they display inconsistently on machines that don't have software like Word installed and can mess up an otherwise well-formatted resume.
 6. **Be concise, and don't spell out trivial things.** Ruthlessly edit your resume and drop sections that add little to no information. Ask yourself: "will the person reading the resume get information that helps them assess if I am qualified for this job?". An exception to this can be when you deliberately do keyword stuffing - see TODO section on this.

Avoiding Biases: Personal Details and Photos

How would you react if a recruiter called you and told you one of the following:

- *"I'm sorry, but you're too young for this job based on your **age**."*
- *"While I'd love to proceed, we already have too many people in the office of the same **gender** and so we need to pass on you."*
- *"I have to reject you not because of your skills, but because you seem like a grumpy person based on your **photo**."*
- *"I think we should stop with the process as no one else in the office has **kids** so you wouldn't fit in."*
- *"I don't think you'd fit in with the British and Canadian people in the office, based on your **nationality**."*
- *"We like to have fun and we're all single, I'd rather not waste time with someone who is **married**."*
- *"Let's just end it here as there's no one else in the office with your **religion** and we don't want to have any arguments about this."*

Of course, you will never get a call like this: any company would find themselves in hot water if they admitted to discriminating against you on any of the above. Still, all non-essential personal information you add to your resume adds one more way that biases can kick in - either with the recruiter or the hiring manager. Adding too many personal details can result in a rejection based on bias.

Do not add personal details to your resume that can lead to negative bias during the resume screen. Biases are real, and you never know what unconscious biases you can trigger with the recruiter or hiring manager. Luckily, in tech, the criteria to get hired is based on your skills and your expertise. So do not add photos, date of birth, gender, nationality, and other details. For most resumes, you do not need more than your name and your e-mail address to apply.

Photos are never a thing for US-based positions or US-based tech companies. In tech, you don't need a photo to decide if they should move forward with you: it's about your skills, not your looks. In some countries, non-tech positions require photos, and this somehow got stuck in tech. However, all hiring managers and tech recruiters I've spoken to confirmed that photos add no value. They mentioned photos being distracting, playing to biases, doing more harm than good. If anyone really wants a photo of you, they can look at your LinkedIn profile, where you can decide if you want to add one.

Biases and minorities

Studies have shown correlation on resume details that expose racial clues leading to fewer interviews and the reverse. This is especially prominent for minorities.

A group of researchers at Stanford University and Toronto university ran a two-year study, investigating the effect of resume whitening, covered in the Harvard Business Review article [Minorities Who 'Whiten' Job Resumes Get More Interviews](#). The results were astounding: removing racial clues resulted in more than twice the callback rate.

"Some of the resumes included information that clearly pointed out the applicants' minority status, while others were whitened, or scrubbed of racial clues. The researchers then created email accounts and phone numbers for the applicants and observed how many were invited for interviews. (...) 25% of black candidates received callbacks from their whitened resumes, while only 10 percent got calls when they left ethnic details intact. Among Asians, 21 percent got calls if they used whitened resumes, whereas only 11.5 percent heard back if they sent resumes with racial references."

While this study was not specific to software developers, the study also found that employers who were advertising as pro-diversity still discriminated against resumes with racial references.

4. Resume Structure

How to structure when you are a new grad, someone with work experience, or someone with lots of seniority.

Structure for Interns, New Grads and Bootcamp Grads

When you are a student or new grad, you often feel like you have little to no experience to show for. Make the most of what you have, though - and if you are truly low on experience, address this parallel to the application process. Here are the experiences that catch the eyes of people reviewing your CV the most, in priority order:

1. **Real-world work software development experience.** If you have been working part-time or full-time as a software developer, list this, together with your accomplishments. Don't be shy. Show off what you have delivered and how you have already gone above and beyond.
2. **Your school details.** Especially if the school is well-known and you have high grades, this can be impressive. If you attend a nationally well-known school, add this information to the details section. For example: *"Budapest Technology University is the #1 ranked university for Computer Science in Hungary"*.
3. **Internships.** Be specific on results, impact, and your contribution. People with internships can stand out from the crowd or applicants. Be aware though, that for large tech companies, it is common to see new several applicants with multiple successful and impactful internships behind their backs.
4. **Sizeable contribution to real-world (open source) projects.** If you are a core or frequent contributor to a project, list this. If you have created a project that has now multiple contributors or many users, show this off. If you are not yet - perhaps you can join in with an open source project and get some experience that will help you stand out?
5. **Projects that stand out** due to their impact, such as their complexity, number of users or other, impressive metrics.
6. **Tutoring and leadership positions in student groups.** If you have already been teaching your peers - as teaching or lab assistants - that is a great sign of you being able to mentor others. Similarly, if you have led a student group or a project, list this. In both cases, list results, impact, and your contribution.

Here is a structure that could work well for a new grad, using the [Pragmatic Engineer's Resume template](#):

Education and Certifications		
Degree Name, University, locations.		Expected Graduation: Dec 2020
Coursework: relevant courses, like data structures & algorithms, data mining etc		
Activities / Awards: ones that stand out teaching assistant or scholarships		
Languages and Technologies		
<ul style="list-style-type: none">• Languages: List of languages you are proficient at• Technologies: Same on technologies• Others: Tools and concepts relevant to the job you are applying for		
Experience		
Software Developer Intern	LogMeIn	Summer 2019
<ul style="list-style-type: none">• Internship experience summary, focusing on results, impact and your contribution		
Projects		
Project Name		March 2019
<ul style="list-style-type: none">• Project details, specifics and a link to the project		
Interests		
<ul style="list-style-type: none">• List of interests (assuming they fit on the one page)		

A possible structure for a new grad resume

Follow these guidelines for a resume that is easy to scan, with the most relevant parts being closer to the top:

- **Fit on one page.** As a new grad, you should fit on one page. You'll be up against hundreds of other applicants, and no one reads the second page. As you have more working experience, then a second page will start to make sense.
- **Start with Education.** Add details on your (expected) graduation date, details on your major, and list out any relevant or standout activities, grades, awards, and anything else that made you stand out from your peers.
- **Work Experience.** If you have it, add it. If you have more than a few months' work experience, you could consider moving this up to above Education. List internships here.
- **Languages and Technologies section:** make sure to add the things you are hands-on with. This should be on the front page.
- **Projects:** you probably don't have as much work experience, but you likely have projects to show for. Use the results, impact, and your contribution approach to describe why they are important and link to them. Where possible, link to the source code on Github - assuming it's nicely organized, with a good README.

- **Interests:** it's nice to add a thing or two that you enjoy doing in your free time. These can be conversation starters on interviews, later.

COVID-19 and new grads/intens

If you are a new grad or someone looking for an internship, your situation in 2020 will be far more difficult than previous classes had. Companies are not only reluctant to hire, but well-known tech companies have rescinded internships, and new grad offers in the first half of 2020. This is a first for most of these companies. Additionally, there's more senior talent on the market than in the decade before, due to layoffs. This means you'll be competing with more people with similar backgrounds as yourself, for fewer positions.

New grad hiring will be extremely slow until work-from-home is the norm. Companies will be vary of onboarding people with little to no experience, who they cannot coach. This means a few things. First, getting *any* job will be a great achievement and should be something to celebrate. Second, if you make it here, there will be little to no room for negotiation.

For the companies that do have junior openings, referrals become more important than before. On top of applying for the "big" companies of your dreams, apply to smaller, local companies as well - and have your resume or cover letter convey just how enthusiastic you are about *that* company.

You might need to look for alternative ways to get some experience, in the meantime, like doing some open source work, building side projects or other things. I strongly recommend following the [How to be a Kickass New Software Engineer guide](#) to level yourself up while applying. The guide was written by self-taught Raymond Gan, who has has a successful career since graduation from bootcamp, becoming a senior engineer in two years. I especially recommend point 8 in the guide.

The good news is that things *will* get better. For inspiration, read how [a developer graduating into the dotcom bust turned out just fine](#). See the [Hacker News comments](#) of this article for more inspiration:

"And even among them, the passionate people found a way. I got into tech with no education during the recession just on psychotic passion alone. I was working at <physical job> but hacking all night. Eventually I convinced someone to hire me (...) and it was game on."

Structure with Work Experience

When you are no longer freshly out of school, to follow this structure to make your resume easy to review.

- **Work Experience at, or near the top of the page.** Your current title, company, and past few years' of work experience is something the recruiter and hiring manager will want to glance at. Make it easy by adding it to the top, or close to it.
- **Have a Languages and Technologies section on the first page** that lists the relevant technologies. List things where you are an expert, or at the very least, proficient at. They could be domains, languages, or frameworks that the job description mentions. Don't bother listing non-relevant technologies, or listing your skill level.
- **When spending a long time at one workplace,** list out the key projects you shipped and the titles you've held there. Have you been promoted? Treat it as a new "sub-work" section, listing the projects you did at that point.
- **Education details become less important with seniority.** For education, slowly reduce the length of this section, as you have more work experience. With 1-3 years experience, it's fine to have details on it, but with 5+ years, you'll likely just want to have your degree, date of

graduation, and no more than one standout achievement, if it's still relevant. Summa cum laude can probably stay. GPA, courses, activities should all disappear.

- **Spend less space on old positions.** For people with 10+ years of experience, your work experience beyond 10 years is less interesting. What you did then is not representative of what you do now, and there's little point in listing obsolete technologies. Shorten these sections, and consider removing or skipping ones that are not relevant - especially if you were job-hopping a decade back. The resume should sell you, not show every place you ever worked at.
- **Extracurricular.** Add patents, publications, talks, standout open source projects, published projects, and other areas that could grab attention. In the case of open source and published projects, aim to be specific on why they are important. Close with hobbies and interests to make it personal. Keep the list of hobbies and interests short.
- **Projects:** the more work experience you have, the less relevant outside work projects tend to become. If you have something that really stands out, consider listing it under extracurricular, linking so that people reading the resume can inspect it. Use the results, impact, and your contribution format to explain why the project was relevant and impactful.
- **Interests:** depending on the length of your CV, you can add a few fun things to make your CV more "human". If you stick with a one-page format and you're short on space, you can skip this.

Your resume should tell a story, backwards that people can glance at and understand. Take a look at this "story":

- | | | |
|-----------------------------|--------------------------------------|----------------|
| • Senior software engineer | Uber | 2019 - present |
| • Senior software engineer | Skyscanner | 2018 - 2019 |
| • Software engineer II | Skyscanner | 2016 - 2018 |
| • Software developer | Scott Logic | 2014 - 2016 |
| • Software developer intern | LogMeIn | 2013 summer |
| • Software developer intern | Sensenet | 2012 summer |
| • BSc, Mathematics | Budapest University
of Technology | 2010 - 2014 |

It shows progression and clarity. This is the type of clarity you ideally want to convey. Here are a few things you can do to have a clear story:

- **Make promotions clearly visible.** In the above example, it's easy to see that this person was promoted, while working at Skyscanner. Recruiters and hiring managers should see it as well. Getting promoted within a company is an important signal - it shows that you can succeed in creating impact and being recognized by your company. Good hiring managers pick up on this signal: especially because as a developer, it's often easier to job hop, than get promoted within the organization.
- **Don't always stick to your "formal" titles when they describe your role poorly.** Some companies have developer titles that sound strange. Like in finance, the Associate title (for a software developer) or the Vice President title (for a senior software developer). If the position does not describe your role well, consider clarifying it and using a description that does. You can also add to it, to clarify the meaning. For example, if your title is Associate, you could write Software Developer (Associate). At a startup, I was "promoted" to take on the Community Manager role on top of being a developer. My title was officially changed to Community Manager. I still regret having my last job title on my resume saying Community Manager, instead of "Software Developer", which was my actual job - and perhaps mentioning in the description that I extended my role to include community management.

-
- **Dec 2013 vs 2013: drop the months** for dates that are more than a few years old. In the above example, the dates section was especially easy to scan, as there were no months added. Would have they added more information, if they were there? Hardly. When you have more than 2-3 years' experience, the people reading your resume won't care about month-level details. They are noise. So remove this.
 - **Omit work experience that doesn't support your story.** I have seen people add non-technical jobs, including pizza delivery to their profiles. I've also people with 15 years experience listing all 4 internships they had well over a decade ago. Focus on your story and only leave the relevant parts in. Talk about your *recent* experience much more in-depth than early ones.

The Summary Section

Many resumes start with a section titled "Summary" or "Profile". People often add from a sentence to a paragraph of text. Here are a few examples:

- *An experienced and positive backend developer, who enjoys working on high-performing teams and contributing to open source. Looking for a remote position as a Go developer in a finance company that values open source, hard work and gives back to the community.*
- *Solid yet versatile Software Engineer with more than 12 years experience in developing and leading projects. I hold a BSc in software engineering and am passionate about distributed systems.*
- *I am a software engineer with 5 years experience, passionate about technology and microservices. Throughout my career I have built and managed systems from small to large in the automotive, media and restaurant industries. I have worked with product teams, implementing solutions in the cloud and working with several technologies and services.*

Here's the thing: recruiters and hiring managers barely read this section, regardless of how much time and effort you put into it. They only do so, when they re-read the resume for the third time. And at this point, they already decided to proceed, even without the summary section. In general, I find little value in this part and suggest you drop it.

If you do keep it, make it short and add specific and practical information. For example, mention the years of experience you have: especially if this does not match up from when you graduated.

I have seen a few exceptions where the summary section can be helpful:

- **Senior/standout profiles** can greatly benefit from a summary section or a few sentences giving context on what you are looking for. This is for the "instant yes" resumes, where hiring managers will be eager to learn more, and *will* actually read this section. For example, if you have four years of Google experience and applying for a smaller company, the hiring manager will read the summary, where you might mention that you are looking for your next challenge with a growing company.
- **For fully remote positions**, a summary that also mentions when you are only looking for remote positions or that you are highly adept at remote work. This can be useful for the hiring manager.
- **When changing roles compared to your last title**, for example going back from manager to IC, use the summary section to indicate this. Again, your resume will stand out due to your last title, and the recruiter/hiring manager will be curious to know why you are applying. They will read the top-level summary - assuming you make this easy to spot.

-
- **With a formatting that naturally lends itself to read this section**, and the section is clear and concise. This is usually the case with resume templates that have lots of whitespace - so the tradeoff is your resume has less information on two pages.

5. Standing Out

Standing out by focusing on your results, the specifics and your contribution. Writing a resume for that specific job. How to optimise for tech companies versus companies with specific technology focuses.

Results, Impact and Your Contribution

When listing your work and project experiences, focus on what you achieved, as opposed to what you did. For the achievements, try to quantify these with the impact and (business) results. A framework you could use is "Accomplished {impact} as measured by {number} by doing {specific contribution}". This is similar to [the structure Google encourages](#) for resumes. You don't need to use the exact same wording. However, do make the impact clear, what your contribution was, and add specifics, where you can.

You want to convey that you are self-sufficient, that your work made a difference on your team, and that you are aware of your work's impact. To do so, edit your accomplishments with these in mind:

- **Use numbers.** Quantify your impact, where ever you can. Most resumes do not contain numbers: if you add these specifics, you will stand out. Instead of saying *"Built a tool widely adopted by the company"*, say *"Led a team of 3 developers to build a dependency injection framework that was adopted by 15 teams and all 50+ developers at the company"*. Numbers can be several things: number of people on the team, lines of code, code coverage % before and after, SLA changes, revenue generated by the project. They can be number of users, number of installs, number of five-star ratings, number of customer support tickets you proactively resolved- and many others.
- **Use active language** that shows what you have *done* and how you have been proactive. Use active verbs like "led", "managed", "drove", "improved", "rolled out" over passive ones like "improving" or "rolling out".
- **Mention specific languages and technologies** that you used towards the end of your description. Impact and your contribution are more important to convey than the technologies. However, it's worth calling out what tools you've used. Mentioning technologies in this context is more powerful for hiring managers and interviewers who are reading your resume in detail. Make sure that these technologies overlap with the ones you listed in your standalone, Languages & technologies section in your resume.

As an example, compare these two descriptions of the same experience:

Original statement	Edited for results, impact and specifics
Worked on the Payments team, developing microservices.	Improved the availability of the payout Go microservice from 99.8% to 99.9% by improving the monitoring/alerting system and proposing, implementing and rolling out a read-through cache layer using Redis.
Automated error handling process of our restful API services that reduced one of our clients support ticket rate.	Reduced support tickets by 80% for a large client by stepping up to rework error handling, ensuring 100% of error codes are mapped to appropriate HTTP codes, and non-mapped errors trigger exceptions on the Node.JS restful API.
Enhanced customer experience of the MySap platform through integrations of third party APIs such as zoom-rooms for remote meetings, square to handle recurring payment, etc.	Improved customer conversion by 30% of the MySap co-working platform by implementing recurring payments and integrating Zoom rooms, using PHP and Go.

The original descriptions are generic, while the edited ones do a good job reflecting more on achievements and specifics. The edited versions grab the attention of the person reviewing the resume more.

You stand out from the crowd by talking about the impact of your work and how you contributed to it, not just what you did. The more senior you are, the more of an expectation this is: but doing so will make you stand out in all cases. Your resume should showcase how you have consciously and proactively added value through your actions. People who do this are the ones sought after - developers who follow directions are a dime a dozen.

Talking about impact and your accomplishments is one of the most underrated approaches in developer resumes. Several senior developers have come to the same conclusion:

- "Effective resumes need to contain two things: responsibilities and accomplishments. The first tells the reader what your job was; the second, what your results were. Unfortunately, most people fail at the accomplishments part" in the article [What accomplishments sound like on software engineering resumes](#) by developer and co-creator of Django, Jacob-Kaplan Moss.
- "Your goal should be to have at least one number in each bullet point, supporting the story that the text tells. So few resumes have any sort of numbers or statistics on them, you'll put your resume ahead of 90% of the other applicants' resumes." in [Track your professional stats like a pro athlete to give your resume power](#), an article by lead developer and manager Andy Lester.
- Are you an Implementer, a Solver, or a Finder? Senior engineers are not implementers, and your resume should convey that you are a Solver or a Finder, argues software developer Itamar Turner-Trauring in the article [To get a better programming job, explain your problem-solving skills](#).

Don't be Humble

Your resume should sell you. Don't claim untrue things, but do aim to paint a great picture of yourself for the audience: the recruiter and the hiring manager.

- **Talk about yourself, not your team.** Avoid using "we" and use the first person instead (in most cases, you can drop the "I"). The resume is about you, and what you have brought to the table in the past. And what the company would get by moving forward with you.
- **Be concise but *not* humble.** Don't hide your achievements - and when in doubt, inflating them on the borderline will hurt less than hiding them. Your CV needs to make you stand out from an already competitive crowd.
- **Make your side projects & open-source contributions shine.** If you built impressive projects or have great open source contributions, bring attention to these in those sections of your resume. Follow the results-impact-contribution model in calling this out, where you can, as opposed to just linking to your Github profile with no explanation or an app you've built. If you don't sell it, the person reading the CV might not look at it in detail.
- **Do talk about extracurricular activities,** at the end of your resume. Talk about what their impact was, how they were difficult, and link to high-quality resources that you have created. For example, if you've organized a meetup with 100 participants, mention this. If you have a technical blog, link a specific, high-quality article, the reader can read. Many resumes are dry, and showing off high-quality or standout activities can make a good resume even better.

(Coming in the update: specific examples - TODO)

Write a Resume for That Job

The days of submitting one generic resume for all job postings are slowly coming to an end, thanks to COVID-19. There are more job seekers for every tech job than there have been in over a decade. This is great news for recruiters who are seeing lots of inbounds. However, it means you need to put in more work for your resume to grab the attention. To make your resume stand out, you need to write it for *that specific* job description.

Create a “master” version of your resume that lists out lots of details in your work experience and projects sections. Use the results, impact and your contribution language. Don't worry if this version goes beyond two pages - as long as you'll be able to trim it down for each job description.

Then, create a version of your resume for the specific job description, re-editing it, so it uses similar language to what is in the job details. Remove examples that don't help you with this position, or move them out of the way. If a job description is for an Android role with a focus on Kotlin and you have both Android, Kotlin, and web experience, make sure your resume shows your Android and Kotlin contributions - and perhaps move the web experience further down.

An example customization for *that* job

Take this excerpt from a job description at Amazon. I added the highlights to point out keywords and key areas that are opportunities to mirror in your resume - assuming you do have experience in these areas. These phrases are ones that you might consider reflecting on, in your resume.

Description

Do you want to be part of a team that designs and implements critical payment related services for Amazon with air-tight security and five-nine availability, that serve millions of requests per minute? Do you want to be part of a fun group that explores cutting edge technology, with a culture of learning from each other and developing each other? Do you want to be part of an organization that will be in the center of projects that will shape the future of the payments industry? If you answer yes to any of the questions above, this position is for you!

As a software development engineer, you will:

- Define, design, and implement multi-tier distributed services that secure and serve customers' payment data, support cool new initiatives such as mobile payment, and provide first-class customer experience on Amazon's websites and mobile devices.
- Lead the team in designing, implementing, and testing of major features in the next generation of Amazon's payments platform.
- Estimate engineering effort, plan implementation, and rollout system changes that meet requirements for functionality, performance, scalability, reliability, and adherence to development goals and principles.

Basic Qualifications

- 4+ years professional experience in software development Computer Science fundamentals in object-oriented design
- Computer Science fundamentals in data structures, algorithm design, problem solving, and complexity analysis
- Proficiency in, at least, one modern programming language such as C, C++, Java, or Perl
- Effectively collaborate in a fast paced environment with multiple teams in a large organization (software development, QA, Project/Release Management, Build and Release, etc).

Preferred Qualifications

- Knowledge of professional software engineering practices and best practices for the full software development life cycle, including coding standards, code reviews, source control management, build processes, testing, and operations
- Ability to take a project from scoping requirements through actual launch of the project
- Experience in communicating with users, other technical teams, and management to collect requirements, describe software product features, and technical designs

Now take this part in your resume:

Before

Skills summary

- **Languages:** Python, PHP, Java, Go
- **Databases:** Postgres, MongoDB, Redis
- **Tools:** AWS/Azure/GCP, Docker, Git, Kafka
- **Other:** data structures, algorithms, full stack software design

Software engineer at ThisCompany

- Designing and developing back-end systems with different tech stack stack (Java, Python, Go)
- Created a generator of Grafana dashboards from microservice code
- Developed a reverse proxy for testing, caching calls to test-environment
- Introduced a beta environment, where new features can be roll-out for a selected amount of customers

This is not bad - but it is clear how this description is a generic one. It does not reflect on the job description at all. Let's make it specific for the Amazon listing. Highlights mark the updated phrasing that now mirrors the job description language better. Note that the content of the resume is exactly the same. After the changes, however, it reflects the language this specific company or job listing uses.

After - updating for *that* specific job listing

Skills summary

- Languages: Expert in Java and Go, proficient in Python and PHP
- Databases: Postgres, MongoDB, Redis
- Tools: AWS, Azure, GCP, Docker, Kafka, Git
- Other: Data structures, algorithms, distributed systems, engineering best practices

Software engineer at ThisCompany

- Defined, designed, implemented and rolled out a multi-tier customer profile service, using Java, leading a team of four engineers. This service is used by five other teams.
- Introduced best practices on reliability, monitoring and alerting. Built a Grafana generator that creates dashboards from microservice code: this tool was adopted by more than 10 teams. Improved testing practices by developing a reverse proxy for testing, caching calls to test-environment, adopted by my team.
- Improved how we do rollouts by introducing a beta environment, where new features can be rolled out for a selected amount of customers. Rolled out this environment company-wide.

The person behind the profile is still the same. However, a recruiter that reads both versions will more likely move ahead with the second, tailored version.

Different Companies, Different Focus

Top tech companies care far less about the specific languages used, but they do care about software engineering skills. Consultancies and agencies are more interested in very specific technologies and years of experience with those technologies. Tailor your resume for each.

Depending on what type of company, and the type of developer role you are applying to, recruiters and hiring managers usually pay attention to different parts in your resume. This has to do with the type of people these companies are hiring, and if the role has any specialization. The most common type of companies and roles are these.

Tech companies hiring generalist software engineers

The “big” tech companies, and fast-growing venture-funded companies almost always look for developers, who are generalists. This is because their tech stack can be varied, and change quickly. These companies look for good understanding of at least one programming language, and good knowledge of algorithms, data structures and - for senior candidates - designing systems.

An example job description for this kind of a position could read something like this:

Minimum qualifications:

- Bachelor's degree in Computer Science, similar technical field of study or equivalent practical experience.
- Experience in coding, using either Java, C++ or Python
- Experience using HTML, JavaScript and CSS.
- Experience building up full stack features, from UI (mobile + web) to backend systems.

Preferred qualifications:

- Experience in front end development.
- Familiar with browser compatibility.
- Knowledge of JavaScript advanced features.

Software engineers working at our company develop innovative next-generation technologies. Our products need to handle information at massive scale. We're looking for engineers who bring fresh ideas from all areas, including information retrieval, distributed computing, large-scale system design, networking and data storage, security, artificial intelligence, natural language processing, UI design and mobile; the list goes on and is growing every day.

As a software engineer, you will work on a specific project critical our company's needs with opportunities to switch teams and projects as you and our fast-paced business grow and evolve. We need our engineers to be versatile, display leadership qualities and be enthusiastic to take on new problems across the full-stack as we continue to push technology forward.

With your technical expertise you will manage project priorities, deadlines, and deliverables. You will design, develop, test, deploy, maintain, and enhance software solutions.

To grab the attention for recruiters at these companies, aim to follow these principles in your resume:

- **Do mention programming languages** you are proficient with, *especially* ones that the job description mentions. Knowing a few languages gives good indication that you'll be able to pick new ones up on the job: something that is common at these places.
- **Do tailor your resume to the job description**, mentioning areas the job description asks for, assuming you are proficient with it. Data structures and algorithms, computer science fundamentals, object-oriented design, distributed systems, and anything with scale and

numbers to prove it are usually the type of experience that catch recruiters' eyes at these places.

- **Do focus on impact, and engineering metrics** of your work. Strong resumes at these places tend to mention things like RPS for systems people have built, test coverage % increases, cost savings on infrastructure, number of users, number of customer teams, latency reductions and others.
- **Do mention open source frameworks by the company** that you are familiar with, use, or contribute to. Many of these companies contribute heavily to open source, and you can stand out by being proficient users of some of these - especially when they are lesser known frameworks.
- **Don't list too many technologies**, frameworks, tools, databases and others. At these places, hiring managers assume that you can pick up any of these, quickly. Also, recruiters are far more sensitive to keyword stuffing: it reduces the value of your resume.
- **Don't list trivial tools** that require little to no engineering knowledge, or that are tied to a given technology. You'll get a frown from hiring managers when they see Trello or JIRA mentioned. You don't need to be a software engineer to know these.

Companies hiring for *that* specific technology

Agencies, non-tech-first companies and smaller companies often hire for a specific technology. The tech stack at these places is already set, and very unlikely to change the next few years. You'll be able to tell that you are looking at a *specific technologies company* from the job description, that list technologies required extensively. These technologies will be the exact stack the company works with - and the stack they are looking to hire for. Here is an example job description:

Our company is in a phase of rapid growth, driven by increasing global demand for our services. To service this demand, we are looking to hire exceptional Java Developers to work alongside our existing team, all driving the services forward.

Main Duties and Responsibilities

- Implementing the technology strategy, developing new products and services and maintaining the existing code base.
- Actively developing high quality production code for front ends and real time analytics feeds
- Delivering well-thought out, clean code, helping Itarle scale to support business growth.

Required technical expertise

- 3+ years experience of writing high performance Java 1.8+, including concurrency and distributed systems.
- Strong knowledge and experience in unit- and integration testing, working in a CI/CD environment, and using distributed version control systems.
- Object-oriented design and reactive programming.
- Good working knowledge of Linux and Docker.
- Experience in Maven, Spring, and JMS. Gradle, Kafka is highly desirable.
- Relational databases.

Desirable technical skills

- ELK stack.
- Prometheus / Grafana / Opentracing.
- C++ / Python / Groovy / Kotlin.
- Actor frameworks (e.g. Akka).
- Javascript/HTML5.
- Atlassian workflow & productivity tools.
- Ansible.

The job descriptions for these places are also more traditional, mentioning things like “duties and responsibilities” or mention “technical expertise” and “delivering code”. To grab the attention for recruiters for these companies, follow these principles with your resume:

- **Do mention all relevant technologies in the job description** that you are comfortable with - even if you might not be fully proficient with all of them. Many of these companies have extensive keywords setup in ATSES, that can easily filter you out, if you have too few technologies matched.
- **Do spell out how many years experience you have** with the main language the company is looking for. It is worth having a short summary section, listing out this information for the recruiter (and the ATS) to see.
- **Repeat the technologies** you’ve used in your past work experience, to confirm both to the hiring manager, the recruiter, and to the ATS, so your resume looks like a good match.
- **Do not list unrelated or trivial technologies.** While keyword stuffing is an important piece in applying for these types of companies, don’t go overboard. And do remove technologies that are not relevant.
- **Do keep your resume easy to read.** Because of the many technologies you might be tempted to mention, it can be tempting to make up sentences just to be able to repeat these. Don’t do this. Many applications coming into these companies are overflowed with keywords, but tell very little. Find that pragmatic line, and your resume will grab the recruiters eye, as you both have the relevant skills, as well as a clean resume.

Keyword Stuffing

Keyword stuffing is a controversial but important topic. Most mid-size and larger companies and many recruiters simplify the resumes filtering by discarding ones that do not have certain keywords. This can happen automatically with the Applicant Tracking System. However, even for companies that don't use ATSes, recruiters almost always scan for relevant keywords. They will often pattern match either based on expectations from the hiring manager or based on keywords that they have seen lead to offers in the past.

Let's take a backend job description that explicitly says that the team uses Java for development. In most cases, resumes without mentioning "Java" or "backend" would be disregarded. For a team working on distributed systems, less hands-on tech recruiters might discard resumes that don't mention anything distributed - even if they might describe working on such systems, using microservices, messaging queues. The recruiter is not a software engineer: they just look for "distributed". Note that this practice is less common at large companies with sufficient recruiter staffing - but it is a thing, both with recruiters and especially with automated screening software.

A workaround is to throw all possibly relevant keywords into the resume. This is called keyword stuffing. You can see it happening with this resume, for example:

TECHNICAL SKILLS

Programming: PHP, Java, JavaScript, python (scripting experience), SQL || **Databases:** MySQL, Oracle 11g, PostgreSQL, SQLite, MongoDB. **Back-end Technologies:** Servlets, JSP, Spring MVC, Spring Boot, Laravel, Node.js, Express.js, Web servers (Apache, Tomcat, NGINX, Node) and Microservices. **Front-end Technologies:** HTML5, CSS3, jQuery, React.js, Context API, **Learning**(React Native, Redux, Angular 7), Build Tools (Web pack, Gulp, Grunt), Babel || **Testing:** Junit 5, Jest, Mocha || **Tools/IDES:** Visual Studio Code, Maven, Eclipse, IntelliJ, Vim, Trello, Version Control (git, GitHub, Gitlab), CI/CD (Gitlab, GitHub, Travis CI, Circle CI, Jenkins) || **API Paradigms:** REST, GraphQL || **Infrastructure:** AWS (EC2, S3, Amplify, Fargate), Docker, Kubernetes || **Message Queues:** Kafka, RabbitMQ || **Other Tools:** Trello, JIRA, Asana, Word, Excel

An example of excessive keyword stuffing

While this kind of keyword stuffing will help with getting a good score on the ATS, it makes the resume look unprofessional and one that is desperately trying to include as many keywords as possible. Even if a recruiter would decide to proceed, as a hiring manager, I would immediately put this resume in the "maybe" pile.

So how do you include keywords relevant for the position, while also keeping your resume professional? You do this by including the most relevant keywords - technologies and frameworks - in your resume, but do this in a human-readable way.

A good way to have keywords present in your resume, while also keeping it professional is to have a short "Technologies", "Skills" or "Languages and Technologies" section where you list the technologies you are familiar with and are relevant for the job. In your Experience section, sprinkle specifics on the relevant technologies you've used in projects. It's fine - and for the ATS systems, it can even be advantageous - to mention the same technology both in the technologies section, as well as under the specific part of the experience. But do ensure the resume stays easy to read.

Let's go back to how to improve that part in the previous resume. We'll cut down the technologies listed to be relevant to the job description, and mention technologies that were relevant in getting certain projects done:

LANGUAGES AND TECHNOLOGIES

Languages and frameworks: PHP, JavaScript, Python, Laravel, React, Angular

Technologies and tools: MySQL, MongoDB, AWS, Git

Other: Data structures and algorithms, API design, unit testing

WORK EXPERIENCE

Backend Software Engineer, SmallComp

- Re-architected the restful API powering the mobile client, using **PHP** and **Laravel**.
- Improved customer conversion by 30% by building an improved checkout flow, end to end. I migrated the existing **MongoDB** database to **MySQL**, and built the frontend using **React**.

Sensible keyword stuffing: cutting down to ones relevant to the position, bringing examples in the work experience section

The result is a cleaner resume that still has key technologies listed - in fact, it reinforces the ones that the candidate has more hands-on experience with.

Different jobs filter for different keywords. This is another reason you'll want to create a custom resume for *that* job description. You can tailor your wording and technologies you are proficient with, so ATSes score it highly, and recruiters also keep reading after they've seen key technologies mentioned. Don't forget: your goal is to get through the initial resume screening where most inbound applications without referrals fail - many of whom are actually qualified for the job, but their resume does not tell the story.

6. Common Mistakes

I've noticed certain, repeating themes I am calling "mistakes" with resumes. These are areas of improvement, which almost always make resumes better. They are the following.

Poor Format

I have seen too many resumes, where developers had good, and relevant experience, but this became hard to understand, due to poor choices in formatting. The most common issues are:

- **Hard to scan resumes.** Multi-column resume formats are far harder to scan, than the one-column ones. While candidates are often proud on how much information they squeezed on one page, this format often leads to their resume being read less detailed. Simple formats work better.
- **Too much bolding.** Your resume should have little bolding: and that bolding should be consistent, limited to key parts, like dates, titles and companies. I see too many resumes bold out seemingly **random** parts in the middle of the sentence that **don't** seem to **make sense**. Focus on concise descriptions, and a clean format, and be very careful with bolding within sentences.
- **Too "flashy" resumes.** A developer resume is 95% about the content, 5% about the style. Still some people go overboard, choosing eye-catching templates, to the point that contrasts can make things hard to read, and recruiters struggle to find relevant information.
- **Inconsistent formatting.** Different font sizes, key information being mis-aligned or positioning elements with spaces over tabs can all lead to resumes that show an amateur formatting. While this itself will not result in a rejection for more senior candidates, it conveys that you don't have much attention to detail, and don't know how to present yourself well.
- **Sloppy phrases** scattered across the resume. For example, using "etc.", "and so on", slang or unprofessional language. Use clear and neat grammar, and full sentences.

Forgetting About Your Audience

You are writing your resume for recruiters and hiring managers who you do not know. You want to convey your skills, and tell a story to them, assuming they know nothing about you. Common mistakes I've seen people make include:

- **Using internal acronyms and jargon.** Avoid using project names and acronyms that are internal and people outside the company don't understand. *"I did QA for the N94 and E70 programs."* The recruiter reading the resume will not know what N94 was - nor would most people outside the company you worked for.
- **Using cliches.** Starting with a generic summary with things like *"I am a team player and a fast learner who can hit the ground running"* is a waste of space. They don't mean anything without specifics. Use the "results, impact and your contribution" structure in your experiences section instead to demonstrate any traits through what you have delivered. If you really think it's important to convey these, save them for a cover letter - but even there, back it up by examples.
- **Being too verbose.** The attention of recruiters is limited: they will glance at your resume for seconds. Avoid large blocks of texts, or long sentences. Optimize for quick and easy reading.

It's not easy to distill years of experience in a few, short sentences. Still, you need to do this, and ruthlessly edit your resume.

Unnecessary Details

Many resumes put details that are a waste of space. These are most frequently added because traditional resume templates have them, and candidates assume they should share these details. Here are the most common details that you can skip, in the vast majority of cases.

- **Too many contact details / social profiles.** For contact details, don't share more than four. The most common ones I see are phone email, LinkedIn, Github and website. Choose no more than four of these - and list them so they take up little real estate, on the top of your resume. Anything beyond this is irrelevant. Most recruiters and hiring managers won't even click through on these ones. I've seen resumes that list Skype, Instagram, Twitter, Upwork, Medium - on top of LinkedIn, Github and a website. Stick to very few and relevant links.
- **Photos.** Skip the photo is the strong recommendation of this guide, as detailed in section 3.4 due to the biases it creates. In the rare cases in very few countries where you are *required* to add a photo, use a professional one that makes you look *good*. Smile on the photo or have a positive vibe and avoid the mugshot-like passport photos that make you look grumpy.
- **Spoken languages.** Many resume templates come with a "Languages" section and people who are non-native English speakers keep this separate section that usually says "*Languages: Hungarian (mother tongue), English (fluent).*" Remove this - unless you're interviewing for a Hungarian company, that is. For a tech resume for an English-first company, people assume you are fluent in English and they care about your programming languages, not the different ones you speak.
- **List of references or "references available on request".** Both are a waste of space. References will only be important after you pass the interviews. And it is expected in tech that you'll be able and willing to provide these. Large companies use background checks, and smaller ones follow up themselves, usually after asking you. But save the space from your resume for this.
- **Quotes from others praising you.** Some resumes add quotes from others, such as "*Described as executing at extremely high standard' on previous performance reviews*" or quotes from referrals praising you. These look out of place. Your developer resume is about you selling yourself, not adding quotes from others. Keep the quotes at the LinkedIn recommendations section and off your resume.

Links

Links taking up too much attention (coloraturas or space), dead links, pointing to non high-quality content.

- **Non-clickable links.** I often see links to projects, Github or other sites that are not clickable. The recruiter will never copy-and-paste this link, and as a hiring manager, I will also do this once in a blue moon. Make that link clickable like I did this one:
<https://github.com/gergelyorosz>.
- **Linking to stale Github, LinkedIn or websites.** Many dev resumes often have links to Github, LinkedIn or a website. While most recruiters and hiring managers won't bother clicking through, the thorough ones will. There's few more disappointing things than seeing that your Github is untouched for years, your pinned repos do not have READMEs or that your website

was last updated 4 years ago. Link only if they are up to date. Otherwise save the space and remove it. Contrary to popular belief, you don't need to have these links on your resume - especially when their contents don't add value to your current application.

- **Leaving in the full URL of the link.** In some resumes, links to portfolios or projects are pasted in their full length, such as <https://github.com/gergelyoros/PythonGettingStarted/blob/master/README.md>
Don't do this. Make links clickable, and hide the full URL behind a name that describes what the link is for. No one will print out your resume, then type in the URL into a browser.
- **Links standing out too much in color and style.** Many resumes leave links as they are, with the [default blue color](#). While this would not be a problem, this is often the only color in the resume, pulling eyes to links, that are meant to be details. Consider making links blend in, over standing out, keeping them the same color as text, and underlining them.

7. Resume Templates

A template is great help in getting started with a resume. It's good practice to start with a tried and proven template, then customize it to your own style and preferences. In this section, we'll review popular templates among developers - any analyze them with pros, cons and ways to improve the template, should you choose to use it.

There is no no such thing as a perfect template. And a template is not worth much without great content - content that you will provide.

<div><div>City, Country London</div><div><div>Gergely Orosz</div><div>(123) 456 789 resume@pragmaticengineer.com</div></div></div> <div><div>Technologies and Languages</div><div><ul style="list-style-type: none">• Languages: Java, Go, Swift, Kotlin, (other languages)• Technologies: MySQL, Postgres, AWS, Git, (other technologies)• Other: Data structures and algorithms, (other relevant skills)</div></div> <div><div>Work Experience</div><div><div>Senior Software Engineer</div><div>Uber</div><div>Sep 2018 - Present</div></div><div><div>Payments team</div><div>Amsterdam, Netherlands</div></div><div><ul style="list-style-type: none">• Results, impact and your contribution.• Add at numbers to the impact, use active languages and mention specifics like the languages used.• The more recent the position, the more details you usually want to share.• Lorem ipsum dolor sit amet 40%, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.• Ut enim ad minim veniam 100, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo.</div></div> <div><div>Software Engineer II</div><div>Skyscanner</div><div>2017 - 2018</div></div> <div><div>Customer Success team</div><div>London, UK</div></div> <div><ul style="list-style-type: none">• Results, impact and your contribution• Lorem ipsum dolor sit amet 40%, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.• Ut enim ad minim veniam 100, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo.</div>

Software Developer

Shops

2015 - 2017

London, UK

- Results, impact and your contribution
- As the position is more in the past, you'll want to be mindful on how much details you add, and what you call out. You want to make sure there's space on all the key details on the first page.

Software Developer Intern

Lughele

Summer 2014

Budapest, Hungary

- Results, impact and your contribution. The further in the past a position is, often the less important its details.

Education and Certifications

- M.Sc. Computer Science, University of Munich, Germany. 2013 - 2014
- B.Sc. Computer Science, University of Technology, Budapest. 2010 - 2013



The Pragmatic Engineer's Resume Template

[The Pragmatic Engineer's Resume Template](#) is a clean template that is a good choice to use for developers.

The good:

- The template has many similarities to the Career Cup template, meaning US tech recruiters will find it familiar.
- Good use of bolding and consistent formatting makes the resume easy to scan.
- Dates and titles are *really* easy to read.
- The format works both for one, and for two-page resumes.

The bad:

- The template does not cater to people who would want to add a summary section or more personal information. This can be customized, though.

Ways to improve it:

- Customize the highlight color and the fonts to your preferences.

CareerCup Resume Template

[The CareerCup resume template](#) is quite standard for Silicon Valley software engineers and is common to see for tech company resumes in the US.

The good:

- US recruiters are used to it.
- Consistent formatting of dates and company/school names across sections.
- Dates and titles are *really* easy to read. Figuring out how much experience you have is a breeze.
- The format can be used for two pages as well - just make sure the most important details that recruiters need to see are listed on the first page.

The bad:

-
- Dated style, using no colors. In 2014, when this template was created, resumes printing was still a thing. This template has too much black-and-white.
 - Geared towards top tech companies in the US. For other companies and outside the US, you'll need to tweak this.

Ways to improve it:

- If you are applying for the non-US tech companies, consider moving up the Languages and Technologies section to be on the first page.
- The resume is dated in its black-and-white style. You could use colors to have headings stand out and reduce the bolding.

VisualCV Standard Template

The [VisualCV standard template](#) shares a lot of the good with the CareerCup resume. It's a solid alternative to that one - except for the fact that you have to pay to have the VisualCV branding removed.

The good:

- Clean format and nice use of colors.
- A resume format that works well for two-pager resumes.
- Highlights your job titles, while still making dates easy to read.
- Clear separation of sections.

The bad:

- A branded PDF is generated, unless you pay to have the logo removed. If you do not remove the logo, it makes your resume look cheap. Given this is not the best template in the lot, I suggest to go with a free template, and use this format more for experimentation.
- Black-and-white, not much use of colors.

Ways to improve it:

- Consider dropping the "Summary" or replacing it with "Technologies and Languages" or something similar.
- Consider jazzing up the headers and separators with colors.

Google Docs Swiss Resume Template

While I do not recommend using the [Google Docs Swiss resume](#) as is, what I really like about it is the order of sections. This order is a good one to show off your skills (technologies, languages), your work experience and education. Consider using this order in other templates as well.

Otherwise, this template wastes a lot of space on the left side and makes it hard for recruiters to parse the dates on your experience and education.

Google Docs Serif Resume Template

I am not a fan of two-column resumes, as they make it hard to scan from top-to-bottom and they squeeze the space you can add for your experiences. However, if you go with one, the [Google Docs Serif resume](#) is still an okay choice. It is not specific to software development, so I would change "Skills" to "Technologies" and remove the Awards / Languages.

The good:

- Clean format and nice use of colors.
- A one-page resume format.

The bad:

- It's harder for recruiters to scan and answer the question of "how much experience do you have?" Dates are hard to find.
- You don't have much space to write about your experience and the impact you made.
- For a two-page resume with more experience, this format doesn't work as well.
- It's not specific for tech. "Awards" and "Languages" make little sense.

Ways to improve it:

- Only use this if you can definitely fit everything on one page.
- Customize the right column and try to make good use of it. For most people, "Awards" are not what you care about in tech. Look at tips on improving the EnhanCV software engineer resume.

EnhanCV Software Engineer Resume

I do not recommend the EnhanCV [Software Engineer resume](#), and am listing it here to showcase the dangers of resume sites that create resumes that job seekers find pretty. While this resume does look stunning, it does a disservice to any developer using this one. Short of Europass it is one of the worst formats to choose. This is because it encourages adding your photo, which leads to biases. It also has a two-column structure that is hard for recruiters to scan. To make matters worse, you would need to pay for the service beyond the trial.

I advise against using it and listed it as a cautionary example.

Ways to improve it:

- Do not add a photo.
- Power Skills are something you probably don't want on your CV: they're empty buzzwords.
- Only use this if you can definitely fit everything on one page.
- Customize the right column and try to make good use of it. I'd remove "Life Philosophy", rename Toolbox to "Skills" and have a "Languages" and a "Technologies" section.

EuroPass CV

Avoid this CV template in applying for tech jobs. The biggest sin of this format is encouraging adding all the details that lead to biases: photos, birth dates, gender, and so on. Additionally, it's dated, unnecessarily wastes space, adds details that are noise like spoken languages or driving license (!). It represents tech professionals poorly, and it's a great way to have the recruiters' eyes roll. The Europass format is also *not* required to apply to jobs in Europe - contrary to what some people incorrectly assume.