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Resume 201: How to Write an Effective Data Science Resume

Alice Chen · Follow
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Here's a note I wrote a while ago serving as a mentor for Correlation One's Data Science for All / Women program. It's been 4 years since first time I met the students!

As a mentor, in addition to providing guidance and resources to help my project team complete their capstone project, I have an added responsibility this year to offer individual career guidance and help my mentees refine their professional development plans, build killer resumes, and prepare for the job interviews.

I still remember feeling extremely anxious when I was hunting for my first job after graduate school. Luckily, I had a great start. And after years being a data scientist and tech consultant, after sitting on both sides of the table for many times, after seeing my candidates turned into high performers at work, I finally get over all my insecurities.

Resume doesn't define a person. But having a good resume in hand could help you survive the scanning algorithm of the applicant tracking system (ATS), and make your profile sail to the top of the resume pile.

I hope to share my experiences to help the early career professionals write better resumes, and hope better guidance in resume crafting helps the recruiting team reach more qualified candidates.
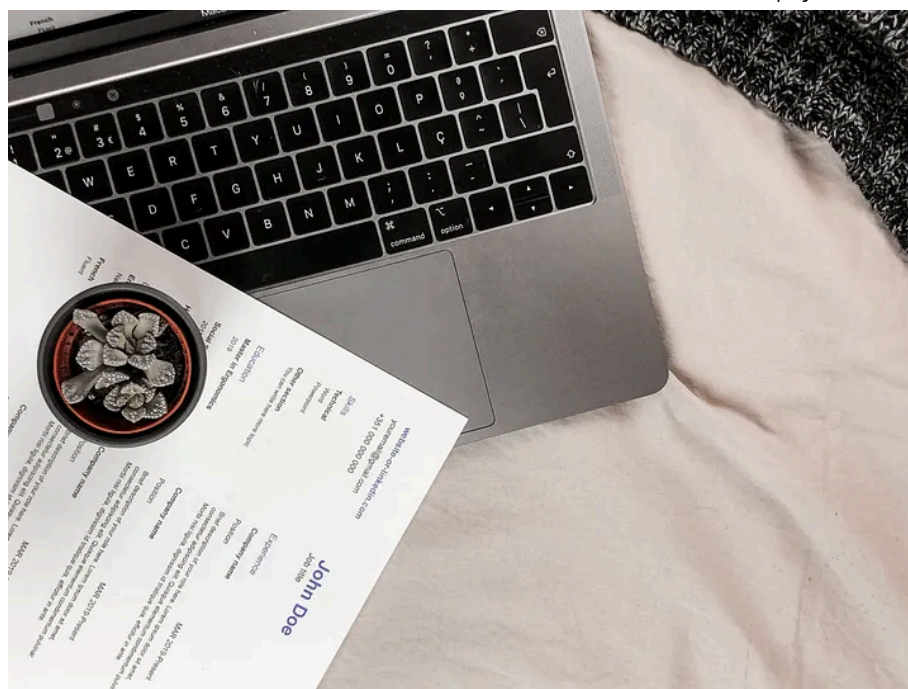
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Guiding Principles

1. **Write for the prospective talent acquisition managers and hiring managers.**
   Putting together a resume is not about describing 360-degree of yourself, but providing enough details about yourself for the characteristics that your future employer is looking for. Every job description articulates employer expectations for a specific role. Additionally, there are the generic skills and traits company is looking for, e.g. problem solving, inclusive leadership, entrepreneurial drive. Try to tailor your resume for the job you're actively pursuing and be more specific.

2. **Make every word counts.**
   A good resume should cover enough details while staying concise. Usually people will not be able to spend a lot of time reading through each candidate's resume. So, it's important to make sure that key information stands out and your resume is easily digestable.

3. **Focus on the experiences, skills and capabilities.**
   If you don't have some of the skills or relevant experiences for your dream role, spend time working on gaining those experiences, invest in learning and developing those new capabilities.

My Suggestions & What to Keep in Mind

1. **Required Sections:**
   * **Header / Personal Information:** Location (City + State), contact information (phone + email) are good enough. It's not necessary to report your full home address. If you have solid LinkedIn page and/or Github repo, definitely include them here. Keep it in one line for conciseness.

* **Education**: There are a few things worth debating. So, I'm going to share my personal opinions. (1) GPA: If you are fresh or recent grad (i.e. work experience less than 3 years), or if you are interviewing with consulting firms, or you are high GPA / 4.0 students at school, you should include GPA. (2) Honors / Achievements: This is similar to GPA. The longer your tenure is, the less this matters. (3) Coursework: I would consider it optional unless you are applying for first full-time job. (4) Online degree / courses: Taking online courses are great, but it's not going to replace your formal college education. If you're pursuing online degrees, you could keep it under Education section. Otherwise, I would put it under a different section — Certifications.

* **Work / Project Experience**: This could be one combined section, or two separate sections. In the ideal case, if you had relevant past working experience, and your primary job responsibilities are your data projects as an individual contributor, I would list everything under one section. If you're trying to break into the Data & AI industry without relevant experience, or if you have extended responsibilities outside of data projects, I would keep two different sections. This would make your resume easier for talent acquisition managers or hiring managers to navigate. Overall, this should be the more detailed section and should be about 2/3 of your total resume.

* **Skills**: They are important. Listing skills that match job requirements could potentially help robotic keyword search. And it would be easy for people to scan through. You can put skills in a few lines, grouping by different categories. Personally, I would not rely on self-rated proficiency level. I think it's safe to omit them. There's no need to include common skills like Microsoft Excel.

2. **Optional Sections**:

Different hiring managers may have different opinions here. But referring back to my guiding principles, you should spend most of the time crafting your work / project experiences and leave most of the space on your resume to showcase them.

* **Objective / Personal Summary**: From a hiring manager's perspective, I would evaluate a candidate during the interview. This makes an objective section obsolete.

* **Certification**: If you have any relevant certification, I would recommend including it.

* **Test Scores**: This will likely only matter if you are fresh graduate and interviewing with top consulting firms. But you would submit scores when you fill out applications online, if required. So, I would suggest leaving them out.

* **Something else**: Some people argue that you should have something on the resume that help you stand out. It could be your professional organizations / affiliations. Maybe it's a hobby, sports, your volunteer activities, club, etc. If you have awards / honors / recognitions for

anything, it worths being captured. Or I would suggest spending some time doing company research and see there is anything that aligns with company culture / core values.

3. **Number of Pages**: 1 or 2 pages are both fine. If your work experience is less than 3 years, I would keep it within 1 page.

4. **Sequence:**

There's no golden formula or rules on how to assembly the resume. Sequence of the different sections probably matters less than the content of each section. Below is how I structure my current resume and it indeed changed a few times over the past years.

* **Education:** It could be at the top or bottom for a 1-page resume, and it should be at the beginning of a 2-page one.

* **Skills:** Again, it could be at the top or bottom for a 1-page resume. But if your resume has 2 pages, I would suggest including Skills on the first page after Education section.

* **Certifications:** I would keep the Skills and Certifications section next to each other.

* **Work / Project Experience:** If your Work Experience and Project Experience are separate sections, Work Experience should come before the Project Experience.

* **The extra:** I included my various activities to support Diversity and Inclusion on some resumes. Since 2019, I spent significant amount of time in leading different efforts. I'm proud of it and hope my future employers share the same value. Depending on the job roles, you can be more flexible and decide what's the best thing to highlight to your prospective employer.

5. **Format and Readability:** First off, you should check and make sure you're using the proper font, font size, indents, margins, bullets, etc. Many formats could work, but the most important thing is to make sure your major accomplishments are standing out and easy to be captured. Occasionally, I need to try really hard to squeeze more words in one line, or fit one more line in the same page. I found Word document is easier for me to manage the nuances (instead of Latex). In terms of using color or graphics, remember: less is more, simple is the best. I would suggest a black and white resume. Optionally, consider a sporadic use of blue color for your name, section titles and hyperlinks.

6. **About Experience Tagline:** For Work Experience, I would suggest keeping 2 lines: First line includes company name, location, date range of employment. Second line includes your formal title. For Project Experience, I would come up with a short, one-line project description with a mix of context and approach. For example, "Predicting House Prices with Linear Regression", "Match job with your skill: A simple job recommendation system".

7. **About Work Experience:** If your Work Experience is a standalone section, you should use it to focus on your daily responsibilities, soft skills, work impact, and put them into a nice summary with a few bullet points. If your Experience section covers both your work and your data project, you should still explain your responsibilities and scope of work, and provide some level of details around your projects.

8. **About Data Project Experience:** For each project, the content can be organized in either bullet points or paragraph. I found bullets are easier to read, but paragraph allows me to include more details. If you have many different experiences, remember to tailor your selected experiences based on the job description and be sure to highlight the most relevant (and recent) projects. I also recommend this formula for describing your project experience: Context + Activities + Impact.
   * **Context:** Context covers the applicable industry, project background and problem statement.
   * **Activities:** Talk about what you did (e.g. scraped data, built model, ran experiments), the model / algorithm used, programming language, model performance, etc. Again, to match the job requirements, if there's any "buzz" words you want to include, they should go here. Be careful about your word selections for the verbs and nouns, and remove unnecessary adjectives. Although you don't have to include everything above for every project, you should include enough details of your project work.
   * **Impact:** The best thing to include is actual business value and impact. And the best way to evaluate impact is to include both quantitative and qualitative measurements. Alternatively, you can talk about potential impact, extended use cases of your solution, or describe the end product / results / insights.

9. **Other Random Stuffs:**
   * **Acronym:** Remember to keep the long-form explanation before you use any acronym.
   * **Timeliness:** The more recent experiences matter more than outdated ones. For either job responsibility or technical skills / relevancy, I consider 2 year as a good rule of thumb.
   * **Transition from Academia to Industry:** PhD candidates may have lots of experiences in teaching, research, thesis, presentations, publications, etc. When applying jobs in industry (for non-research roles), these experiences need to be re-organized: the narrative matters. The focus should be on relevant experiences for the industry job, transferrable soft and technical skills, etc. These should be reflected in the sections above.

Final Words

- Read job descriptions to understand the different role expectations. But don't wait till you're 100% matching the requirements to send out your

resume or start the job application.

- Read **lots of** good resume examples (or LinkedIn profiles) and learn from them.

- "Talk about projects, what part you played, and what tech you used. What was the outcome? What did you learn from it? What key achievements have you made in that role?"

- Update your resume frequently. Include new experiences, skills, capabilities and polish the language of your descriptions.

- Find creative ways to engage. Getting a resume ready and submitting resume online is one of the many ways to find a job. If you're fresh graduate, take advantage of the campus recruiting events. If you're from any underrepresented group, research and pay attention to the diversity hiring program from different companies. Start to build your digital presense on LinkedIn. Continue to meet people and networking.

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Additional Resources

- *Data Scientist Job Titles*
  The "data scientist" title means different things for different companies. In different industries, "data scientist" could also be identified with other titles. It always worths investing time in researching the role, reading through the job descriptions and understand the expectations.

- *Resume Template*, and *Consulting Resume Tips by Victor Cheng*
  If your resume can pass the most critical eyes from the top strategy consulting firms, it will take you anywhere.

- *Jason Goodman's advice on applying to Data Science jobs and building data portfolio projects*
  As a former strategy management consultant, a current data scientist / software engineer, he provided advice and it showed perfect balance of effective communication and in-depth technical knowledge.

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Written by Alice Chen

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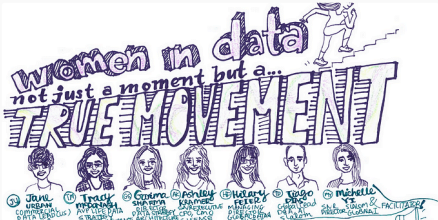linkedin.com/in/yajingchen

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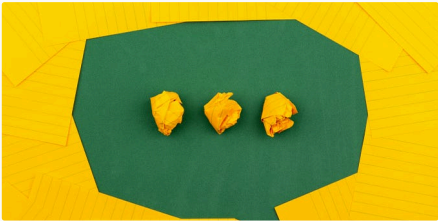
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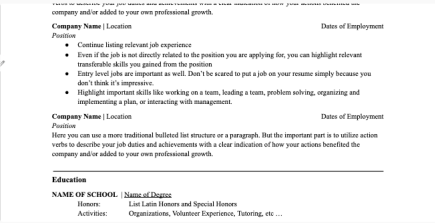**10 Best Practices in Building Conversational AI for Customer…**

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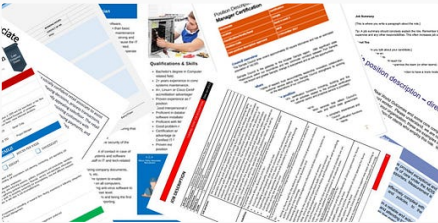
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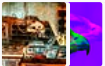
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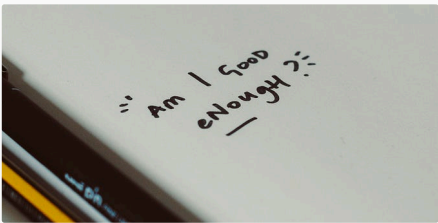**What is ChatGPT?**
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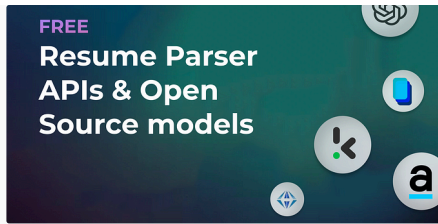
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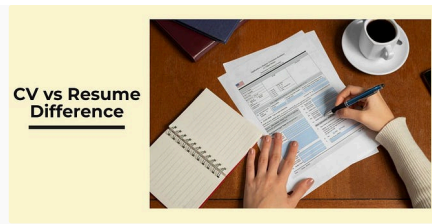♡ 86 💬 1

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