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Career Advice

How to Write a Winning Résumé

By Peter Fiske
October 18, 1996

Welcome to "Tooling Up," a monthly column about job hunting and career development for scientists and engineers. I'm Peter S. Fiske, a Ph.D. in geological and environmental sciences, former postdoc at Lawrence Livermore National Laboratory, and author of *Put Your Science to Work*. In this monthly column, we will explore all the practical aspects of seeking out, applying for, and landing a job. We will also profile career fields and meet the people in them. And we will answer your questions about jobs, job hunting, and your own search.

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- Regrettable Resumes
- Regrettable Resumes, Part 2
- Job Search Tips from Hiring Managers
- Tooling Up: Resume Wisdom
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- Tooling Up: How to Swim With Sharks

I'm sure you've all taken at least one class with an instructor who thought it would be cute to pass out a quiz on the first day to see how much you know. When you bombed it (and we all did) the usual response was to feel terror-stricken and desperate, with the magnitude of your ignorance fully exposed for all to see. Instructors, as we all know now, *love* to put students in this desperate state of mind! I hated this experience.

So forgive me if I indulge in the same sort of game regarding resumés and CVs. Even if you answer all of these true-or-false questions correctly, it might get you thinking about your own CV or resumé.

- Question 1: (True or False) Resumés and CVs are basically interchangeable.

- Question 2: (True or False) The purpose of a resumé or CV is to get you a job.

- Question 3: (True or False) The main message you want to convey in your resumé is where you have been.

The answers

Answer 1. FALSE! Resumés and CVs are different, *very* different. The differences between the two include structure, content, length, and style. The most common mistake that science-trained individuals make in their job search is submitting a resumé that looks too much like a CV.

Answer 2. FALSE! The purpose of a resumé or CV is to get you an *interview*. Getting the job comes later, after going through interviews and sometimes follow-up interviews. Your goal when submitting your resumé or CV should be to get your foot in the door, that's all!

Answer 3. FALSE! A principal difference between a CV and a résumé is that CVs focus on where you've been, whereas resumés must also convey where you are going. A resumé cannot simply be a list of your past experiences. It must be a selection of those experiences and skills that are best suited *to the job to which you are applying*. How do you go about doing this, you ask? Well, just read on ...

Figure 1. CVs vs. Resumés

	Curriculum vitae (CV)	Résumé
What is it?	A full list of your professional and educational history.	A summary of your experience and skills that are most pertinent to the advertised position.
How long is it?	Usually many pages; length is not important.	Usually one page only. Multiple pages only for senior-level positions.
When do you use it?	Used for academic positions and research positions in government and industry.	Used for every other type of job outside of academia and research science.
Do you include your publications?	A full list of publications is essential.	Even a partial list of publications is rarely included.
How important is style and layout?	Style doesn't matter that much; content is what matters most.	Style and content are important. Bad style is a real liability.
Should I modify it to match each specific job to which I am applying?	CVs do not need much alteration to fit each specific job opening	Resumés should be adapted to fit each specific job to which you are applying.

For scientists of all ages, applying for all types of jobs inside or beyond research science, a resumé or a curriculum vita (CV) are the number-one job hunting tools. Most scientists are familiar with the rules for constructing a CV; after all, we come from an environment in which CVs are the norm. However, most Ph.D. and master's-trained scientists and engineers have little or no experience writing a resumé. As a consequence, they end up creating a document that looks very much like, well, ... a CV. What's wrong with that? When you are applying for a job and competing with a whole batch of other folks who know what a resumé should look like, yours will stand out as odd, mismatched, and out of touch--not exactly the best first impression to make. Although you may be very bright and have an outstanding background, you will likely lose out to a more polished candidate.

Unlike the CV, which is a summary of *all* your experience, a resumé is a summary of those aspects of your education or job experience that qualify you for the particular job to which you are applying. Resumés are only a page in length (unless you have a number of years of experience in a particular field), and space is at a premium.

There are two general types of résumés: chronological résumés and skills resumés. Chronological resumés are the ones you are probably most familiar with: They list your work experience in chronological order. Skills resumés categorize your experience under several key skills areas: the skills needed for the job you are seeking. Chronological resumés are useful for demonstrating a pattern of working, especially if you are continuing in a general profession or field. They emphasize progression and a steady history of work. Skills resumés emphasize marketable skills and can be more useful for people making career changes or for people who have worked off and on for some time.

Basic Parts of a Resumé

There are some sections of your resumé that may appear identical to your CV. Other sections will be much different.

Name and Address: Your name, address, phone number, fax number, and e-mail address should be centered at the top of the page, big enough to read easily. If your resumé is two pages long, be sure to put your name in the header of the second page.

Statement of Professional Objective: Objective statements are a common part of most professional resumés but are rarely if ever found on a CV. As its name suggests, an objective statement is a one-sentence statement of what YOU are looking for. Obviously, this statement may change depending on the type of position you are applying for. The objective statement tells the employer what type of position you are seeking, where you want to work, and what aspect of the field you are interested in.

Wait! Hold on a second! Why is this necessary, you ask? Isn't it obvious that you want the job; after all, you *are* applying for it! The short answer is: Employers use summary statements to weed out the clueless from the savvy. You cannot rely on your resumé alone to speak for your qualifications and career goals; you must articulate them at the beginning. Applicants who have carefully researched the job for which they are applying will be able to describe clearly and succinctly why they are applying for the position. Applicants who are simply mailing out a blizzard of laser-printed resumés to everyone advertising an opening will not be able to tailor their objective statement to the position and will be at a disadvantage.

An objective statement must strike the right balance between breadth and specifics. Saying something like: "Applicant desires a challenging position utilizing his skills and experience with the opportunity for advancement" says nothing to the employer, other than, of course, that you want a job.

Still murky about the objective statement? Here are some good examples:

> "Challenging position as computer programmer or analyst incorporating skills in numerical analysis, resource management, and land-use policy"
>
> "Desire position in management-consulting organization requiring outstanding verbal, analytical, and teamwork skills"
>
> "Position as analytical chemist in semiconductor manufacturing company, specializing in transmission electron microscopy"

Each of these clearly states the applicant's goals, and some have even summarized a few of the applicant's abilities. As you can see, in order to construct a good objective statement, you have to have a specific objective in mind. And that requires researching the jobs for which you are applying.

Summary Statement: Some resumés also have a summary statement, which is another brief (one or two sentences) description of the applicant's most important qualifications. These usually include the most important skills for the job in question, years of experience in field, credentials, or areas of specialization.

Education: The educational background of research-trained scientists is usually outstanding on paper. It is something that people will really notice. A candidate who has a Ph.D. from the Massachusetts Institute of Technology in geophysics and graduated summa cum laude from Vassar College will cause anyone to sit up and

take notice. In fact, any advanced degree in a resumé submitted for a position for which an advanced degree is not the norm can generally be considered an asset. For this reason, I put the Education section right under the Objective/Summary statements (if any). Put information such as "graduated cum laude" in this section, but put other academic and related awards in a separate section (more on that later).

Just so everyone is clear on this, you should put the following in the Education section in reverse chronological order:

> Name of institution (Ph.D., master's, undergrad
>
> Location of institution and Year of graduation (don't bother with the month)
>
> Department or major (or dual majors) and academic honors (i.e., cum laude, etc.)
>
> Any professional certificates or accreditations or minors

Do *not* bother putting in:

> The titles of your theses (that might go in work experience but only if applicable)
>
> The name of your adviser
>
> Your GPA (if it is requested, often along with GRE/SAT scores; list it/them separately)
>
> Your high school

Some master's and Ph.D. scientists tell me they have been turned down for jobs because they were "overqualified." Some have suggested that, in some cases, you should remove Ph.D. from your resumé and pretend that you never went to graduate school. A Ph.D. or master's is a liability only if you are unable to show a prospective employer the valuable transferable skills you have acquired along the way. Your challenge is to make clear how your education and/or training are relevant to the job you are applying for.

If you decide that the degree is not something you want to highlight, there are ways to de-emphasize it. One way is to put your education section at the bottom of your resumé. That way employers are already impressed with your experience before they discover your advanced degree.

Experience/Work Experience: This is the place to list three to five experiences/jobs that highlight the set of skills that is most desirable to the employer. Most importantly, you should show how you made a difference. How do you do this? By citing specifics. Use quantifiable measures of what you did: Don't just say you TA'd a lab section; tell employers that you "taught introductory laboratory chemistry to 23 students." Whatever you do, do *not* assume that a simple job title will suffice; most employers don't really know what jobs in other fields are like in detail.

In describing these experiences, you should use *action verbs* in an active past or present tense. For example, rather than saying "was responsible for operation, maintenance, student training, and certification of users for x-ray fluorescence spectrometer, 1992-1995," say "maintained and operated x-ray fluorescence spectrometer; trained and certified 44 students over 3 years." By using action-rich verbs and numbers, you highlight your accomplishments in quantitative ways.

If you are just emerging from graduate school, your school research experience may be the first and biggest item, but it shouldn't be the only one. Teaching experience can look good as a separate category, especially if you had real teaching duties as opposed to grading the problem sets from your adviser's class. Summer work for companies or part-time work done while in school is great, too. If you did something particularly notable in college, that can go in, especially if your work experience is limited. For example, I was the technical director of a theater on campus. With each of these items, you should list the following first as a heading: Job title, Name of the organization, Location (city, state) of organization, and Time of employment (again, use only years--nobody cares about months)

This information should all be on one line, perhaps in bold.

Other sections: You may want to include a list of particular skills if you have not already mentioned them in your description above. Computer skills and foreign-language skills might go in this separate section. Depending on the job, you might want to mention particular software that you are familiar with. Because most of the "real world" uses C or C++, you should mention if you have some experience in these languages. FORTRAN is not widely used in the programming world these days.

What not to include: It used to be cool to add some personal information such as hobbies and the like. After all, maybe the reader is an avid hiker like you; dude, you've got it made. But these days, personal information is not only extraneous; it can seem unprofessional. Skip the little section at the bottom of the resumé that says you love to ski, hike, shoot large animals, and collect spores, molds, and fungus. Also verboten are the following: date of birth, your marital status, the number of children you have, and salary requirements.

By law, employers are not permitted to ask you your age, marital status, or the number of children you have. They can ask oblique questions such as "Do you have any special needs that would affect the performance of this job?" You may think you're doing them a favor by divulging this information, but in reality, it gives them the impression that you lack experience in the workplace.

References: References, if requested, should be listed on a separate page with their full name, job title, place of employment, relationship to you, full address, phone number, fax number, and e-mail address. Also, don't bother putting the statement "References available on request." Some people tell me that references are being used less and less these days, although I have received calls about people who have listed me as a reference. In general, my impression is that employers are relying more on the written job materials and the interview to make a hiring decision and are using references as a final check. However, references that are known to the prospective employer can be extremely powerful. These people often do get called, and if they are prepared to sing your praises, you have a terrific advantage. Do remember to prepare your references ahead of time for the possibility of inquiries.

Final pointers, tips, and advice

Writing a bad resumé is easy. Writing a good resumé is hard. It will take time and many drafts. Because research scientists are often targeting several very different career paths simultaneously, it is important to have several different resumés that accent different skills. It also goes without saying that resumés should be immaculate-looking and flawless in spelling and punctuation. (Bad spelling is a real kiss of death, so, for God's sake, proofread it and give it to your friends to read.)

Editor's note: This article was updated on 5 April 2007 with the author's new book title and improved formatting.

Comments, suggestions? Please send your feedback to our editor.

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