Ask Me Anything About: Industry Job Search for PhDs

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Some PhD Truths and Stats.

1. You are exceptional.   Less than 2% of population has a PhD. ☺

2. You are highly regarded in industry. Nearly 50% of PhDs work in Industry, many in the world's top companies. 😎

3. Tenure track teaching and administrative campus jobs are decreasing. 😕

What are characteristics of companies and qualities they seek in those they hire?

Companies:

1. Driven by results and earning profits

2. *Faster paced* - may make decisions without having all the data

3. Give employees titles different than academia, and from other companies

4. Value collaboration, teamwork, group projects - more than sheer brilliance.

5. Hire people based on skills and competencies
   ◦ Require excellent oral and written communication skills - ability to communicate outside discipline, to non-PhDs in marketing and business
   ◦ Leadership/project or budget management experience valued
   ◦ Value adaptability, flexibility, embrace change, ability to work in ambiguity
   ◦ Your boss' or your client's problems are your own
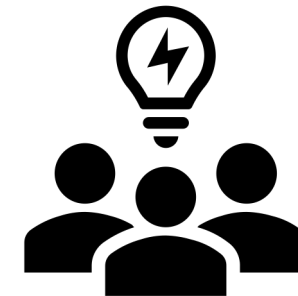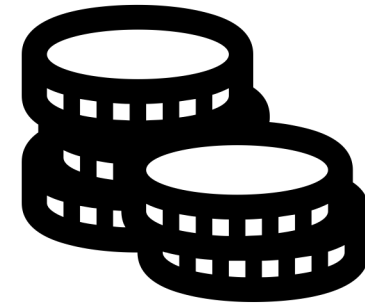
Most PhDs in Industry work in these 3 areas:

R&D (Research and Development) - innovative activities undertaken by corporations or governments in developing new services or products, or improving existing ones.

Marketing & Sales

Application - Applications scientists provide support to customers in lab equipment, reagents, or lab-services *industry -* in lab or field. Field applications scientists (FAS) help customers do their own work.
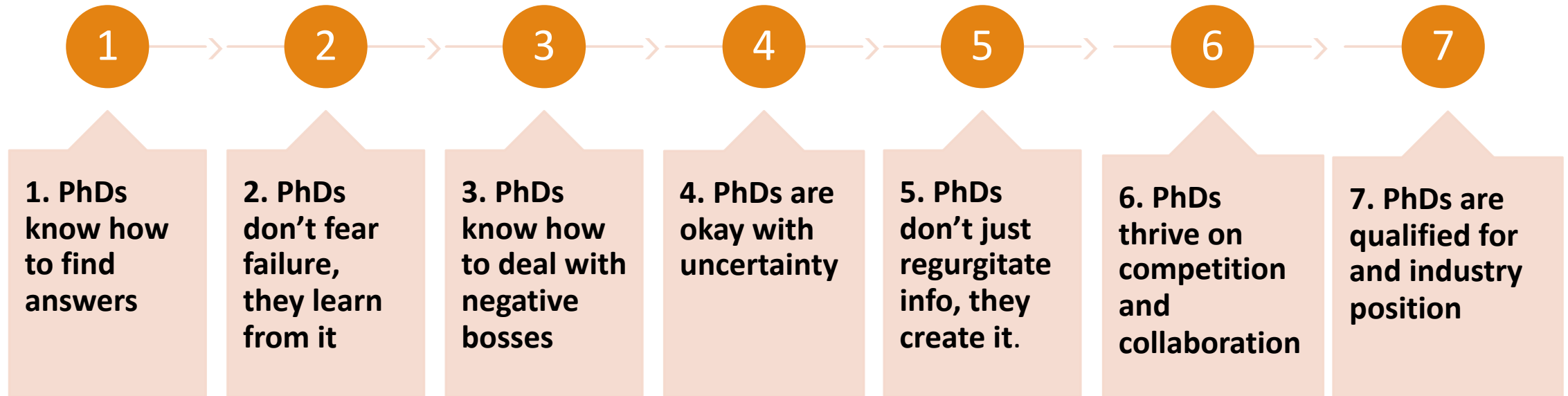
Applications specialists in all fields provide training, set up equipment, deliver presentations and product

demonstrations at customer sites and conferences.

https://www.sciencemag.org/careers/2010/02/applications-scientist-career-track

7 Advantages PhDs Have Outside Academia

7 Advantages PhDs Have Over Other Job Candidates, The Cheeky Scientist

1 → **2** → **3** → **4** → **5** → **6** → **7**

1. PhDs know how to find answers

2. PhDs don't fear failure, they learn from it

3. PhDs know how to deal with negative bosses

4. PhDs are okay with uncertainty

5. PhDs don't just regurgitate info, they create it.

6. PhDs thrive on competition and collaboration

7. PhDs are qualified for and industry position

Top **3 desired industry skills**: (1) **critical thinking; (2) complex problem solving; (3) correct decision-making. PhDs have all these!**

Industry is not hiring for your PhD Credential! They are hiring you for your PhD skills!

- Written and oral communication
  - Able to explain science to lay people
  - Able to explain value of what company does
  - Be able to present the "gist" in 10-20 mins.

- Teamwork

- Critical thinking and analytical reasoning

- Complex problem solving

- Information literacy

- Innovation and creativity

- Tech skills

- Qualitative reasoning

- Project Management, Goal Setting

- Supervising people, budget

"Employers don't ask for a PhD, but ask instead for a high level of skills."

- Matt Sigelman, Burning Glass Technologies
4-20 Conference

91% employers value **skills** over degree
87% value **applied knowledge**

Translate the work you've done to provide evidence you can use the skills you developed and apply them to solve the employer's problem

- Beyond the Professoriate Program 4-1-20

The Transition from Academia to Industry Requires Time and Some Hard Work

Step 1: "Assess Yourself"

1. **Assess Your: values, interests, personality, skills**

Key Resources - **Personality Assessments:**

- Myers Briggs Type Indicator - Personality Assessment

- Gallup Clifton Strengthsfinder

"Individual Development Plan" (IDP):

- myIDP: Self-assessment and career planning tool for students in the Natural Sciences

- ImaginePhD: Self-assessment and career planning tool targeted at humanities and social science PhDs, but widely applicable to any field

Step 2: Explore Careers Beyond Academia

Resources:

National Postdoctoral Association: career resources relevant for graduate students and postdocs

Free the PhD: Private org. focused on helping science PhDs transfer into industry

InterSECT Job Simulations: Online platform with job simulation exercises for career exploration

Beyond the Professoriate: helps PhDs leverage education into careers in Industry, Non-Profit, Higher Ed Administration, Faculty. Use free/low cost resources.

Science Careers: Career advice for grad students, and job board from journal *Science*

The Cheeky Scientist: job search training platform for helping PhDs get hired into industry careers. Use free resources.

Professional Associations - https://www.occareercafe.com/associations/

PhDs at Work: network for professionals across industries.

Bureau Labor Statistics – Occupation Groups and Outlook

Step 2: Explore Careers Beyond Academia

Step 3 - Transform Yourself On Paper and Online:
(a) Do Research
(b) Create a **Sharp** Resume and LinkedIn Profile

Industry job search, is <u>not</u> "what can I do with my degree?" It is:

- **"What skills do I have that a company will value? How can I demonstrate them?"**

- **How can I differentiate myself and show my "unique selling proposition"?**

1st - Research and Planning:

1. **Research Position Titles: Company websites, <u>Bureau Labor Statistics</u>, Job Boards**

2. **Join Industry Groups on LinkedIn, Professional Orgs in your field**

3. **Get professionally active on Social Media. Follow companies on LinkedIn, Twitter.**

4. **Study appealing LinkedIn profiles in your field**

5. **Analyze Job Descriptions for desired skills. *What will company pay me to do?***

6. **Find Industry Mentor outside academia – alumni, referral**

7. **Attend on/off campus professional development events**

Create Sharp Resume or Hybrid CV/Resume

ATS eliminates 75% of resumes. Show employer you can do *this* job by using Keywords from job listing and company website.

Tips:

1. 1-2 pages. No objective; use profile or summary of qualifications

2. List experience by relevance to position. Employers care about your title, what you achieved. Dates less important.

3. Make it Accomplishments-focused. Employers care about your outcomes achieved, not your job duties. Not responsibilities include. Quantify.

4. Publications, conferences not important unless specified in ad

5. No references (unless ad specifies). No typos. Use bullet points.

6. Skills Section important

7. Tailor for each job using *exact* KEYWORDS and reprioritizing

- "Helped PI recognize $1 million in grant funding by leading team of scientists to complete all projects on time resulting in grant renewal every year."

Terence Cheung 2010

Convert Your Multipage CV to a Resume or a Hybrid CV/Resume

Resumes, CVs and Other Career Documents

Most industry jobs require a resume, not an academic CV (curriculum vitae). Use the chart below to learn more about the difference between CVs and resumes.

Curriculum Vitae (CV) vs. Resumes

	Academia, Faculty	Industry
Main Document for Experiences	CV	Resume
Employer Values in the Search	Detail & thoroughness, pedagogy & philosophy, shared decision making	Brevity, practicality, value added, efficiency; limited to 1-2 pages (2 for PhDs or for those with more experience)
Key Skills	Research, publishing, teaching	Varies based on position (example skills: analytical, interpersonal, teamwork)
Additional Documents & Tools	Teaching statement/philosophy, portfolio, LinkedIn	Portfolio, LinkedIn used more widely

PhDs Have a Unique Skill Set. You Just Have to Describe it in terms of What Employers Want.

PhDs have a doctorate in knowing how to learn. You can learn anything. This is valuable for companies that want to train people.

PhDs are self-starters, yet know how to collaborate to achieve results

PhDs are more capable of dealing with failure than any other professionals on the planet.

PhDs are also skilled at working hard under high amounts of pressure.

PhDs have to meet hard deadlines, manage multiple projects at once, and present their findings in front of other intelligent doctors who are trained to find holes in their logic.

BUT…..

Biggest problem PhDs have in overcoming barriers to industry: Language. You need a different vocabulary to express your skills. Adopt the vocabulary of the industry. Look at your target and play their words back to them.

PhD task or activity	Skills/competency
I wrote a 50,000 word thesis.	Ability to present and organize large amounts of information in a clear manner. Fluency in Microsoft Office, Excel.
I analyzed loads of data.	Analyzed complex data and presented emerging conclusions and concepts in publications and presentations.
I conducted interviews for my research project.	Questionnaire design (if applicable). Experience in qualitative and/or quantitative analysis. Sensitive to the needs of others. Diplomacy and confidentiality.
Experiments or theory testing didn't work but I found out why and tried again.	Problem-solving skills. Perseverance.
I published papers, book chapters and presented at conferences.	Ability to communicate complex ideas effectively in a range of formats.
I completed my PhD in four years.	Ability to plan a project and deliver it to agreed timelines.
I completed a PhD.	I am able to work with minimum supervision as well as part of a team.
I organized a conference.	Event planning skills. Project management. Budget.
My research group was international or I spent some time abroad for my research.	Ability to interact with colleagues from diverse professional backgrounds to successfully work towards common goals.
I took part in science communication or public engagement events such as science festivals, visiting schools to explain your research, etc.	Ability to communicate effectively to a range of audiences.
I was in charge of a piece of equipment or I set up a research seminar series.	Initiative and self-reliance.

PhDs Have Many Transferrable Skills!

"**PhD grads have many attractive and transferable skills**: Data analysis and synthesis skills, writing and publishing, research design, presenting, grant writing, managing people and budgets, interdisciplinary contexts, self-motivation, critical and creative thinking, problem-solving, time-management and teamwork. These skills are effectively utilized in many fields outside of academia and serve as an important part of our workforce."

PRO TIP: **Data analysis and synthesis skills are the most transferable PhD-completion skills and are critical in 75% of careers**, important in not only faculty careers, but also business, government, non-profit (BGN) careers, and in non-faculty academic work. [Source](#)

LinkedIn

❖ Required for industry job search. 90% of jobs beyond walls of university!

❖ Top of Profile matters most. 1st impression and heaviest algorithmic weight.
  ❖ Photo, Background photo, headline. Profiles w/ photos get 21x more views. From shoulders up.

❖ Experience. Don't simply copy and paste from resume. Tell a story showing your achievements.

❖ Skills – recruiters search for people with certain skills. Get endorsed. Get recommendations.

❖ Join Groups – listen and learn what people are thinking in your area. Groups are about sharing ideas and research, not selling. Come from a place of helpfulness.

❖ To connect with someone new, look for article they wrote, something they did, refer to it

❖ Follow organizations – you can see what they are doing and see which alumni work there!

❖ Initial outreach short and sweet. I'd like to connect. I'd like to talk.

Step 4 - Your Job Search:
(a) Networking (b) Social Media (c) Traditional

Nearly 50% of PhDs are in industry – only 3% of jobs are posted for PhDs.

Social Media: 90% recruiters look at candidates' social media profiles; 89% hire thru LinkedIn.

In 2014 – 18m people found jobs through FB, 10m through LinkedIn; 8m through Twitter

Network to Gather Information and Create Relationships. Tell people you're looking for a position.

- Family, friends, acquaintances, alumni from PhD program
- People who work in career paths you find interesting.
- People working at organizations of interest

Ask them for Informational Interview via Zoom

Connect with Recruiters on LinkedIn!

Cold call/email recruiters/hiring managers.
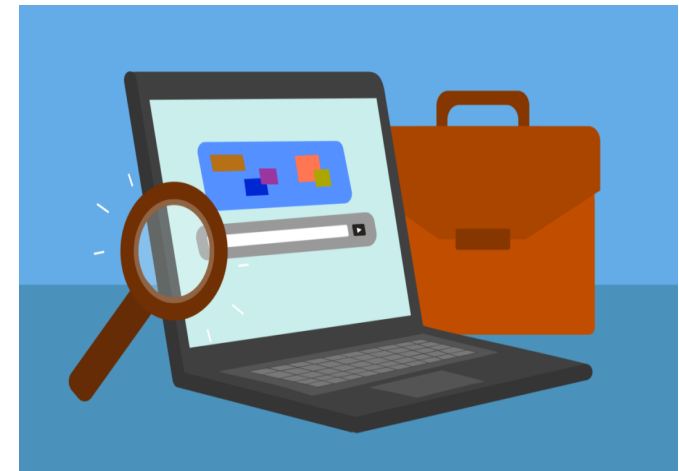
Referrals

Study showed that 50%+ of all people hired to top jobs are filled by referrals, but only 7% of job applicants get referrals.

That shows that 93% of the people are just uploading their resume online and these people are not as likely to get a job as the 7% who are getting referrals.

So, communicating the data and showing why it is important — once PhDs know why something is important, they will do it."
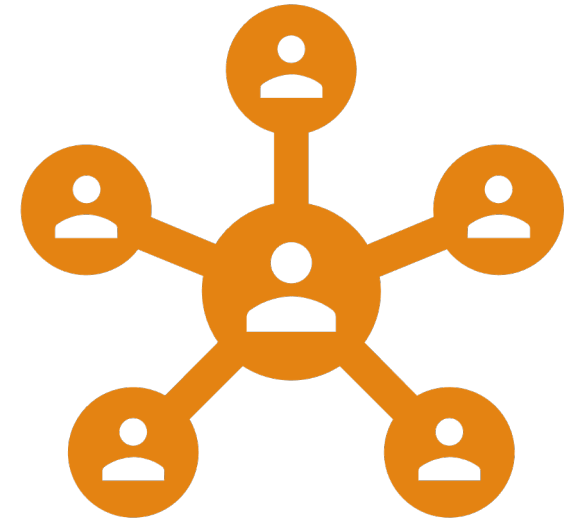
WHERE TO LOOK – JOB DATABASES

URI HANDSHAKE

New Scientist

BioSpace

BioCareers

American Chemical Society job database

International Flavors and Fragrances

Photonics Media

Nature Jobs

Science CareersUSAJobs and Careers in Government – Explore federal employment opportunities across the United States and around the world.

HigherEdJobs – Explore various administrative career opportunities in higher education.

Idealist

Indeed

Simplyhired

LinkedIn Job Postings

Go to websites of companies you're interested in and look at their employment or career page!

Take Aways: Positive, Proactive, Pragmatic

1. Assess how your PhD fits with your overall career plan – *Do an IDP*

2. Activate Professionally on Social Media

3. Build Your Network. Talk with Alumni. Find a Mentor

4. Keep Abreast of Industry Trends

5. Attend Conferences outside your area – not PhDs!

6. Attend Professional Development events

7. Gain non-academic work experience – even social media for your lab! Volunteer on committees

8. Build Skills: Excel, Pivot Tables. Data Visualization. Data Science: SQL, R, Python, Stata. Design thinking.

9. Public Speaking Practice – share your research. Organize program in department. Job Search Group.

10. Leadership, Planning, Project and People Management, Budget, Social Media

11. Define target employer first, then tailor resume. Tell your story and be specific as to how you can help them

Marketing Manager makes $77k
Marketing Manager with SQL makes $93k