



Research Careers: Options and How To Get There

What are some options?

Position	Where
Professor <ul style="list-style-type: none"> • Conduct research; lead a research group. • Advise/mentor students. • Teach. • Obtain research funding. • Write papers, give talks. 	Research university Master's-granting university Undergraduate college * Most require a mix of research and teaching with different focus
Researcher <ul style="list-style-type: none"> • Research, design, and propose new algorithms, systems, architectures. • Develop (with others) working prototypes to showcase advantages and path to production. • Prove new theorems. • Team up with experts in other areas to solve multidisciplinary problems. 	Industry lab Government lab University lab
Advanced product developer <ul style="list-style-type: none"> • Develop new technologies or software for specific needs. • Conduct user interface / user experience design and analysis. 	Industry Government
Data Scientist/Analyst <ul style="list-style-type: none"> • Perform data analysis. • Design algorithms and software. • Propose data-supported strategies for public policy, science, business, etc. 	Industry Government Non-profits
Principle Scientist/Manager/Dean <ul style="list-style-type: none"> • Advance to upper levels in hierarchy. • Provide direction for research, academia. • Represent institution/group to outside constituencies. 	Industry Government Universities and other non-profits
Entrepreneur	Start a company based on your research

See <https://www.computerscienceonline.org/careers/>



CRA-WP

Computing Research Association
Widening Participation

How can you prepare yourself for a research career?

As an undergrad student:

- Get a solid course foundation.
- Get research experience – apply for REUs, do research at your own college/university.
- Apply to graduate school, especially to Ph.D. programs.

As a grad student:

- Master the basics. Then become an expert in an area that really excites you.
- Identify novel projects and complete them.
- Write papers. Give presentations.
- Contribute to open source software.
- Do an internship in a research lab outside of your university.
- Do a software engineering internship if working on research involving software development/as preparation for industrial research lab positions.
- Get teaching experience, if interested in future teaching positions.
- Contribute to writing a grant.
- Get to know faculty who will be great mentors and advocates for you.
- Network. Establish an online presence.
- Consider doing a post doc.
- **Apply to attend CRA-WP Grad Cohort!**

If you went straight to work after college, apply to graduate school.

Applying and Interviewing

	Academic/Faculty	Industry/Gov't/Academic Lab
Where to find jobs	CRA: https://cra.org/ads/ ACM: https://jobs.acm.org/	Company/organization websites. Postings at research conferences or on research listserves. ACM: https://jobs.acm.org/
What to submit	Cover letter, CV, letters of reference, research/teaching/diversity statements.	Cover letter, CV, references.
What to expect in the interview	Initial phone interview 1-2 day onsite interview: meet faculty, students, dean/provost; give a research talk; maybe teach a class.	Initial phone interview 1-2 day onsite interview: meet lab members and managers; give a research talk.

Additional Resources



CRA-WP Grad Cohort for Women
<https://cra.org/cra-wp/grad-cohort-for-women/>



CRA-WP Grad Cohort for URMD
<https://cra.org/cra-wp/grad-cohort-for-urmd/>



Short videos on CS research careers
<https://cra.org/crae/activities/videos-computing-research>

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