Summer internships
Why do an internship?

• Research experience gained very different from classroom teaching. Get a taste of what professional research looks like, and if you like it.
• Usually receive individual mentoring, on research skills.
• Is very sought-after item on CV/resume (employers and phd program admission committees pay particular attention to internship experience)
• Internship mentor is ideal letter-writer or reference for future job applications / PhD applications
• Some internships are very well paid (but some less so, and some not at all).
What types of internships

• Academic:
  • REU (Research Experience for Undergraduates)
  • Working in a lab with faculty at UCSC

• Federal employers
  • NASA
  • National Laboratories (DOE, DOD, ..)
  • USGS, NOAA, etc..

• Industry
REUs

- REUs are funded by the National Science Foundation and hosted in many different universities over the summer.
- Interns are paid to do research with faculty
- Applications are usually in January or February. Apply to each REU separately.
- Search for REUs at

Working with a PI

• If you are interested in a MS thesis in your MS year, consider starting to work with a PI as soon as possible (i.e. during Spring quarter).
• Your summer internship could be paid (this depends on the PI), and kick-start your MS research.
NASA

- NASA offers internships at all levels (including undergraduates), at various sites in the US. NASA Ames is a very large host site.
- Applicants must be US citizens
- Application requires letters of recommendation (I can provide one)
- Deadline is usually Late February/Early March (but start early)

- [https://intern.nasa.gov](https://intern.nasa.gov)
National Laboratories

• Most National Laboratories offer undergraduate and graduate internships. See for instance
• [https://www.energy.gov/jobs-national-labs](https://www.energy.gov/jobs-national-labs)

• Applications for undergraduate research experience at the Department of Energy usually done through the SULI program (deadline usually early January)
• [https://science.osti.gov/wdts/suli](https://science.osti.gov/wdts/suli)
National Laboratories

• Los Alamos offers internships in the Computational Science and Physical Science program (deadline usually early January)

See for instance
• https://www.lanl.gov/org/padwp/adx/computational-physics/summer-workshop/
Federal agencies

Various federal agencies offer internships, though there does not appear to be a single ‘one-stop-shop” to find them. See, e.g.

- NOAA / NCCOS
  https://coastalscience.noaa.gov/about/internship/
  https://www.noaa.gov/education/opportunities/student-opportunities

- NCAR
  https://ncar.ucar.edu/opportunities/internships
Internships in industry

• See
  https://careers.ucsc.edu/student/jobs-internships/index.html

• Search sites:
  • Indeed.com
  • Glassdoor.com
  • LinkedIn.com
  • Mathjobs.org

Different sites have different search capabilities/jobs on offer, so use all of them.
Career workshops / fairs

- Upcoming events at the UCSC career center will help you find internships, prepare job applications, etc.

See https://careers.ucsc.edu/student/events-workshops/index.html
Career preparation

• UCSC Career center offers Career coaching, to help you with various aspects of career preparation:
  https://careers.ucsc.edu/student/coaching/index.html

• Also provides vast online help for every step of job applications
  https://careers.ucsc.edu/student/resources/index.html