I’m a Student Again: Heading to Graduate School after a Break

Anna Gommerstadt & India Irish
Anna Introduction

• Undergrad at Harvard University
  – computer science and math major, wrote a senior thesis
  – was a TA for multiple semesters
  – internship at Microsoft before my senior year

• 1 year at Microsoft as a software engineer
  – worked on Bing News, product had huge user base
  – wanted to do more theoretical work
  – missed teaching and research
Anna Introduction

• PhD (and MS) at Carnegie Mellon University
  – research in programming languages and security
  – taught a LOT - instructor for two courses
  – served on PhD admissions committee

• Now Assistant Professor at Vassar College
  – undergraduate liberal arts college
  – focus on teaching and advising, do some research
  – Grace Hopper was a Vassar alum!
India Introduction

• Undergrad at Spelman College (all female liberal arts college)
  – majored in Computer Science with minor in Math
  – completed a REU and a Semester @ Sea
  – interned at JP Morgan in London and Wall Street

• MS at University of Washington
  – MS in Human Centered Design and Engineering
  – research on children’s interaction with touchscreens
  – studied abroad in Ghana
  – interned at Nike as a UX Designer
India Introduction

• 2 years at Intel as a UX Researcher
  – explored employee productivity and satisfaction
  – required a lot of travel
  – missed doing educational technology research

• Currently a 2nd year PhD student at Georgia Tech
  – Human Centered Computing
  – Evaluating recommendation agents in MOOC
  – Interned at Hulu as a UX Researcher
  – FIRST TIME AT GRACE HOPPER!!
Grad School vs Undergrad
Coursework

**Undergrad**
- take ~4 classes a term in many subjects
- emphasis on exams
- care about grades
- lots of breadth with some depth

**Grad**
- take ~2 classes a term in narrow subject areas
- emphasis on projects
- do not care about grades
- depth with little breadth
Program Structure

**Undergrad**
- Each semester is a sprint
  - lots of little deadlines
  - different professors every semester
- Lots of structure in your week with classes and meetings

**Grad**
- Marathon, not a sprint
  - infrequent deadlines
  - work with advisor(s) the whole time!
- Little structure in PhD programs - can be dangerous!
PhD vs Masters
**Program Structure**

**Masters**
- 1-2 years
  - part-time or full-time
- course heavy
  - ~ 14 classes
- research is optional
- funding varies
- internships are expected

**PhD**
- 5-6 years, full-time
- emphasis on research
- few classes
- programs are funded
- Anna only took 7 classes throughout her PhD!
PhD Timeline

research can be challenging and unpredictable
How to Apply to MS Programs
Finding the Right MS Program

• look at job placement opportunities
  – technical, non-technical, or leadership positions
  – academic, government, corporate, etc.
• different types of MS programs
  – capstone/portfolio - helps for industry
  – thesis - useful for continuing to PhD
  – dual degree MS programs
• review course options
  – can you take courses outside the department?
Deciding to Apply to a MS Program

• review GRE and GPA requirements
  – still apply even if you do not meet requirements
• look for funding opportunities
  – teaching or graduate research assistantship
• reach out to former students about their experience
• attend MS program info sessions
• avoid India’s Theory
  – please apply to more than one school!
Components of a MS Application

• Personal statement/statement of purpose
• Recommendation letters
  – former employers or professors
• GRE Scores and transcripts
• Resume
  – showcase your work and research experience
• Provide a portfolio/website
• Contact professors before applying to a program
• APPLICATION DEADLINES VARY!!
How to Apply to PhD Programs
Which PhD programs to apply to?

• look at specific departments
  – do not rely on rankings, departments can be strong in particular areas of computer science
• look at professors’ websites to see if their research interests you, consider contacting them
• consult your network for recommendations
• a focused list is better than a giant list
  – Anna applied to 8 graduate schools, India to 2 graduate schools
Components of a PhD Application

• recommendation letters
  – usually need three -- can be from industry, need at least one from academia
  – reach out to your former professors!
  – want a letter that says more than that you did well in class
    • research, independent study, teaching assistant, large course project, etc.
  – make it easy for your professors
    • ask early, organize materials, thank them!
Components of a PhD Application

- personal statement/statement of purpose
  - this is really a research statement
  - describe prior research experience and what you learned
  - discuss what you want to work on in grad school
    - what professor/lab would you work with and why?
    - why is that program a particularly good fit?
  - avoid cliches!
    - “Ever since I was 5, I have loved computers...”
Components of a PhD Application

• transcript
  – matters a lot less than you think!
• GRE exam
  – some schools require it, some don’t
• resume/curriculum vitae
  – make it look nice and not an excessive amount of pages
• deadlines are usually in December!
Tips for Success
How to Thrive in Graduate School

• Take care of yourself
  – sometimes that requires declining commitments
  – life doesn’t stop because of graduate school
• Set goals and manage your time
  – use agendas/calendars, productivity applications
• Build your professional network
  – attend conferences, info sessions on campus, join campus organizations, LinkedIn, etc.
• Apply to fellowships
Industry Prepared us for Academia!

• Anna’s Experience
  – got a sense of what software development looks like in the “real world” which helps inform research

• India’s Experience
  – already owned my projects
  – great time management
  – balanced outlook on the PhD process
  – ability to manage and develop a team
What is CRA-WP?

**Individual & Group Research Mentoring**

**Undergrads:** Undergraduate Research Experiences (CREU & DREU), Research-Focused Scholarship opportunities at GHC (GHC Research Scholars)

**Grad Cohort:** Group Mentoring of Graduate Students (Grad Cohort for URMD & Grad Cohort for Women)

**Grad Students & Academics/PhD Researchers:** Mentoring Tracks @ GHC, Returning Scholars @ GHC, Group Mentoring for Early & Mid Career @ CMW

2400+ students & PhDs a year

Stay in touch: cra.org/cra-wp, Twitter: @CRA_WP, Facebook: CRA-WP, Linked-in: CRA-Widening Participation
Questions?
Are you a Returning Scholar?

- There are still spots available at the returning scholars lunch
  - Friday 12-1pm
- To learn more about CRA Returning Scholars and sign up for the lunch: