Some Thoughts on Graduate School

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Agenda

- Why?
- How do I get in?
- Resources
Thoughts on Graduate School

Why?

“The Ph.D. is a tremendous opportunity. You get to pick an advisor in any research area you like and then you get to do research in that area, receive mentoring, think deeply on problems, publish papers, become famous, while paying zero tuition for 6 years and receiving a salary”

-Harchol-Balte (CMU CS)

*He forgot to mention travel!
Thoughts on Graduate School

Why?

• Character traits of a potential graduate student
  • You love to discover through research
  • You connect well with your professors
  • You love to teach others
  • You don’t care if the problem doesn’t have a solution.
  • Graduation…already?

• Character traits of a potential industry worker
  • You are eager to redeem your degree for a good job
  • You simply enjoy “coding.”
  • You are burnt out

PUZZLER: find the grad student!
Thoughts on Graduate School

Why?

“No mom, not that kind of doctor…”

- Engineering Graduate School is not like Med/Law/MBA school.
  - Emphasis on discovery (research), not learning (class)
  - Grad students typically get paid tuition and an adequate living stipend

“They are smart, but naïve; you have to be careful not to tell them that the things we are expecting them to do are impossible.”

-Matt Manson (CMU RI)
Thoughts on Graduate School

How do I get in?

What’s important?

• **Research**
  • Statement of Purpose/“Fit”
  • GPA
  • Letters of Recommendation
  • Teaching or work experience
  • GRE scores

Where do I apply?

• Start with U.S. News rankings, then browse lab websites
• Ask your advisor
• The best schools do not have the lowest acceptance ratios!!

When do I start?

• Start preparing the summer before

How many schools?

• As many as you have time for.
  Do not rush the applications!
Thoughts on Graduate School

How do I get in?

A word on fellowships... APPLY FOR THEM

• Fellowships are your golden ticket into a top-ranked school. If you are at all qualified, you are more attractive than the next student that will cost them ~$40K/year more.

• If you win, schools that rejected/waitlisted you will call you back (they called me)!

• The NSF GRFP is available to all U.S. Citizens, is worth over $121K, and has an acceptance rate of almost 20%.
## Thoughts on Graduate School

### How do I get in?

- Thesis, 2 conference presentations, and 2 first-author papers
- Teaching and Leadership Experience
- Letters from research advisors
- Average GPA and below average GRE
- *NSF Fellowship*

### Where did I apply?

- GA Tech (31%)
- UCF (30%)
- CMU ECE (29%)
- Stanford (28%)
- NSF GRFP (18%)
- NDSEG (10%)
- CMU RI (<10%)
Thoughts on Graduate School

Resources

- *Applying to Ph.D. Programs in Computer Science* by Harchol-Balter

- *Advice for Preparing to Apply and Actually Applying to Science Ph.D. Programs* by Philip Guo

- *Almost Human: Making Robots Think* by Lee Gutkind
  [http://amzn.com/0393058670](http://amzn.com/0393058670)

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