

CS 492

Applying to Grad School

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Agenda

- Application Timeline
- What You Need
- Finding Schools
- Increasing Your Chances
- Other Resources



Grad School Application Timeline

- Junior year+ : get some research experience
- Summer before graduating (undergrads): take GRE
 - Only some programs require this now: look at each school's application page
- December before graduating: fill out applications
- March/April: get decisions back



What You Need

- Personal Statement
- Rec. Letters
- Transcripts
- (possibly) GRE scores



The Personal Statement

- The purpose of this is to help you stand out.
 - In CS, the “I’ve been playing with computers since I was 4” trope is played out, be more original
 - What’s unique about you? What about this particular program interests you?
- The more tailored the better
- Be yourself!
- Showcase your research experience/results/publications, your curiosity, etc. (but not too braggy)



Recommendation Letters

- Typically you need 3
- **Bad:** HS teachers
- **Bad:** prof who you haven't met
- **Bad:** prof whose class you got an A in but doesn't remember you
- **Good:** prof that you took a class with and you interacted with a lot
- **Better:** prof who you did research with and knows how you work
- **Best:** ^ + prof who is well-known in the area you're applying to



Form Letters or “DWIC” Letters are Ignored

- “X did well in class” is not sufficient. These types of letters are thrown out. Make sure this person is going to write a good letter for you.
 - They’ll (hopefully) tell you if they won’t/can’t
- You want them to be able to say something special about you



How to get good letters?

- Do well in all your classes, but be **active!**
 - Sit in the front of class
 - Ask a lot of questions
 - Go to office hours a lot, even if you're not having problems
- Get involved with research **early** and impress several professors
- Chat with professors about their research (even if it's not your area, the prof you're working with)
- Respect fellow students, be a leader, respect lab mates, be engaged
- Present a paper at a conference and engage people about your work



When to Ask?

- **Early.** Think beginning of Fall the year before you graduate
- Tell them the deadlines (you'll probably have many) at the beginning
- It is **your** job to remind them to submit letters. Don't feel bad about gentle nudges (we profs have a lot on our plates, stuff falls through the cracks!)



How to ask?

- If you know the prof well enough (i.e. you've done research with them), should be obvious
- If not, first think “is there someone who knows me better?”
- If still no, give them enough information to write a good letter:
 - Your CV
 - Your specialties/expertise
 - Papers you've published, research you've done



Finding schools to apply to

- **NUMBER ONE THING IS FIT WITH ADVISOR**
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- So: “I want to apply to MIT because it’s ranked #1” **BAD**
 - This is an aimless approach and won’t serve you well!
 - (unless you are not sure what area you want to work in, but if this is the case...)
- **First:** What do you want to work on?
- **Then:** Who are good people who work on that?
 - These people might *not* be at a top 10 ranked school
 - This can work to your advantage!
 - E.g., they probably have fewer applicants
 - competition less fierce



Example

- I want to do research in new algorithms for distributed consensus. OK!
- Best way to find top people in that area: ask your profs, “what are the top conference/journals that publish papers on distributed consensus?”
- Look through conference proceedings/journal articles and look for the (typically) last authors at universities. These should be your candidates.



But Who Should I Choose?

- They publish actively at top venues (ask your research advisor what to look for here)
- What kind of advisor do you want? Hands-on? Hands-off?
 - Want lots of attention? Look how big their lab is. 15 students? You're probably not going to get much face time
 - How famous are they? Hot shot Turing Award winner? They're probably going to be travelling a lot and not too available
 - Paper styles? How many authors on their papers? One student + prof? Or is it a 15-man team on each paper?



Other things to consider

- Location:
 - Cost of living
 - Distance from family
 - Urban/suburban/rural campus?
 - Connectedness (easy to travel?)
- Research the program: what are typical student outcomes?
- How big is the program?
 - smaller programs easier to build relationships with several faculty, tight community



Increasing your Chances: Publish

- #1: DO RESEARCH! (that's why you're *here*)
- Bad: Commit to research with prof, don't show up, don't make progress, don't be engaged
- Fine: Do some research, impress prof
- Good: Help co-author a paper (preferably top venue)
- Better: First-author paper at decent place, e.g. a workshop or tier-2 conference
- **Best**: First-author paper at top place
- Having a paper **published** is the NUMBER ONE thing that will get you into programs



Manage to publish a paper?

- Great, you're already ahead of the game
- Be sure to present that paper at a conference
- The people you meet there will:
 - be impressed with your talk
 - remember you and be willing to hire you



Increasing your Chances: Reach Out

- Contact the prof you want to work with
- Briefly:
 - Do your homework: look at their website, read their papers
 - Have something interesting to say about their work
 - Mention your interests, publications, research
 - But **keep it brief**
- When? Before/after you put in an app. Are they hiring?
- <https://theprofessorisin.com/2011/07/25/how-to-write-an-email-to-a-potential-ph-d-advisor/>
- <https://lucklab.ucdavis.edu/blog/2018/9/17/emailing-faculty#:~:text=We%2orecommend%20a%20subject%20heading,get%20any%20advice%20they%20might>
- <https://contemplativemammoth.com/2013/04/08/so-you-want-to-go-to-grad-school-nail-the-inquiry-email/>



Other resources

- See my info here: <https://www.halek.co/ugrad-research/>

