Higher Study Roadmap

AGenCy Lab @ IUB
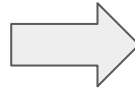https://agencylab.github.io/
Date: March 08, 2022

We are…

- RAs from AGenCy lab, IUB: Saif Mahmud, Amit Roy, Kashob Roy, Tanjid Hasan Tonmoy, Fahim Faisal Niloy and Sugandha Roy
- Completed Undergrad from CSE DU, EEE BUET, Applied Math DU
  - Our CGPAs vary in the range 3.50 - 4.00
- Received admission to CSE / ECE Ph.D. programs
  - Saif - 07 (Georgia Tech, Cornell, UMass Amherst, Penn State, UVA, UC Riverside, U Michigan Ann Arbor (MS))
  - Kashob - 03 (UIUC, UMD - College Park, UMass Amherst)
  - Amit - 05 (UMD - College Park, TAMU, Stony Brook, RPI, UMass Amherst (MS))
  - Niloy - 06 (UC Riverside, Stony Brook, UCF, IU, Clemson, Concordia)
  - Tanjid -06 (UMass Amherst, UVA, Virginia Tech, Arizona State, Purdue, Stevens Inst. of Tech)
  - Sugandha - 02 (Iowa State and South Carolina) both in Applied Math.

Get Research Experience

- We have had on an average 2/3 papers published in 'A' ranked conferences
- Research publications, in our opinion, plays the most vital role in
  - Selecting which professor to approach
  - Writing contents in SOP
  - Seeking the attention of professors and have interviews

Publication in higher rank conference	⇨	Admission in higher rank university

Take the Standardized Tests Early

- Take TOEFL early because
  - The more you delay the more you will get busy with other admission related stuffs
  - In Bangladesh, number of higher study aspirants are not negligible. Hence, you might not find a convenient exam date if you register late
  - You might need to take the test twice if you don't get your desired score!!
    So better start early
- GRE
  - Waved in most of the universities in this fall
  - Still you can sit for this exam to enrich your vocabulary
  - GRE adds a plus point in your profile but was not mandatory this year.

Choose Wisely the Places to Apply

- Obvious way to choose universities is to look at the ranking; go by ranking websites
  - e.g., CSRankings, Best Computer Science Programs - US News Rankings
- But it is best to search for professors who
  - Have a lot of funding
  - Have students from diverse backgrounds working in his/her lab
  - Regularly publishes in top venues
  - Alumni from lab are in jobs you would one day likely to get
  - Whose work aligns with your research interests

Other Factors to Consider

- PhD vs MS
  - Make sure what your goal is; what sort of job are you looking for
  - MS programs usually do not offer funding, but you might be lucky enough to get full funding
- Other factors may include
  - Presence of BD students in that university
    - Indicates they 'somewhat' know about the quality of education of Bangladeshi students
  - Strong theory or practical courses offered by renowned professors of the university
  - Weather conditions and where the campus is located (a scenic landscape, mild weather, existence of international shops, restaurants, music festivals, museums, theaters might be important for you)
  - GRE Waiver
  - Application Fee Waiver (e.g. Rice, U of Rochester, UBC)

Do Some Research on the Profs

- Email them; You can find professors and their emails from
  - The author list of the papers you read
  - Filtering domains in this website: CSRankings
  - Department webpage
  - Random Web Search e.g. "Maryland University Graph Neural Network Professors"
  - On Twitter!!!
- Maintain a google sheet to keep a track with dates
- Before sending email check their recent publications and projects, their website and any instructions regarding contacting them
  - Following them on Twitter might be a good idea to know about their recent research
- Positive replies will help you to select which universities you should apply to
  - You cannot expect to get a reply to all emails you sent out
  - Sometimes profs will contact you (!) once the initial screening is complete

Start Writing an SOP as Early as Possible

- Writing a good SOP takes time and you should revise it multiple times
- Include your research experience and academic activities
    - Develop a storyline on how you are motivated in your research field
    - What problems you targeted and how you solved them
    - A compelling 'story' can impress the profs and the admission committee
    - Mention at least 3 profs' name in your SOP
- Write a draft version before November if you planning for next year's Fall
    - Helps to get mentors who can review your application materials

Get LoRs from Your Current Advisors

- <u>LoRs should not be</u> generic (e.g., every student is the best or top 5% student he / she has ever seen)
- Should contain personalized information (mainly research related)
  - So approach advisors/supervisors/teachers who know you well
- Do not ask for LoRs at the last moment
  - Some professors might be busy or not eager to give you a recommendation. Therefore, you may need alternative.
  - Create a package for each of the recommenders. It should contain your CV, draft SOP, transcripts, papers, extra-curricular activities etc.
- Two extremely helpful resources:
  - Shriram Krishnamurthi: Advice to Graduate School Recommendation Letter Writers
  - How to write good letters of recommendation | MIT Admissions

Take Advantage of Mentorship Programs

- Many Universities you will apply to will have mentorship programs for the applicants:
- Usually of two types:
  - One-to-One
  - Seminar Style
- Getting review of application materials (SOP, PS, CV) from current grad students of the university
- Generally starts in September / October for next fall semester
  - Keep an eye at twitter and department website
  - Register as early and as many as possible
- Sometimes give you coupon for application fee waiver
  - Really worth it! Will save you 80-100 bucks!

Have an Online Presence

- Create a portfolio website
  - Will showcase your papers and projects
  - Academic and professional information, links
- Make your code and data public (e.g. github repo)
  - Try to develop your research projects as much reproducible as possible
- Try to write blogs on your projects and area of expertise
- Contribute to open-source projects and community threads
- Connect with professors, current grad students and alumni through social media
  - Twitter, Linkedin, Reddit - good options

Prepare for Interviews with Professors

- Not all professors will be interviewing you
- Sometimes the admission process is centralized
- What kind of questions to expect
  - Introduce yourself (academic and research background)
  - Discussion about previous papers and projects
    - Lot of in-detail supplementary questions
  - Plan after completing Ph.D.
  - Discussion about professor's current projects
    - You should ask relevant questions and contribute with new ideas
  - This is not a viva exam. You should also ask questions.
    - [Questions to Ask a Prospective Ph.D. Advisor on Visit Day, With Thorough and Forthright Explanations](#)

More Interviews! And Decisions

- Generally, if the Professors consider you for admission and funding, the number of interviews will be more than one
  - They set up meeting with their current students and collaborators
- Eventually, you may get an offer.
  - Professors will inform you.
  - And the department/graduate office will get in touch with you
- Finally, there is a bit of luck involved in the process; So, BEST of LUCK to you.

Experience: applying to European universities

1. The applications are more lengthy in some cases and take more time to complete. Better to allocate enough time (i.e., long before the deadline).
2. The tuition fee is relatively cheap for the MS programs in Austria.
3. Many European universities require hard copies of transcripts and certificate attested by the foreign ministry during application evaluation process. So keep time on hand for arranging the materials and sending them through postal service.
4. GRE is not required for most of the MS programs.
5. Keep an eye on the scholarship sites of the universities separately so that you do not miss a deadline.