APPING DATABASE

**Personal Details**

* Name / Roll no : Dhruv Gupta/09002045
* CPI/DR :
  + Apping CPI = 9.04 (after 6 semesters)
  + DR somewhere in top 10(Apping DR 4 from BTech 2009 batch)
* GRE Score (Vocab+Quant+Essay Writing) :
  + 156/170 – Verbal
  + 167/170 – Quantitative
  + 5/6 – Analytical Writing

* TOEFL Score : 115/120
* Publications (till apping):
  + Nill
* Professors from whom recos are taken
  + 2nd year project guide: Prof Mani Bhushan
    - Definitely super-strong reco
  + BTP guide: Prof Mahesh Tirumkudulu [He said that the reco is strong otherwise he would have not given me reco]
  + Prof Hemant Nanavati: Did some magic work(modified an experiment) in undergraduate lab in 2nd year so he was impressed. He offered me a +1 grade in course which he forgot to give at the last moment, so in lieu of that offered to write a strong recommendation for me. Turns out that a reco is way more important than a lab grade :)
  + Did not take reco from MITACS intern guide. The work offered was not good, so I was not confident if the reco would have been very strong. Had it been neutral it would have been of no value. So decided against taking it.

**Universities**

I applied in Process Systems Engineering(Control, Optimization....math stuff!). Here is the list of univs along with the ranking I associated with them. Note that everyone’s individual ranking will be different. For PhD research group’s rank is most important than univ brand. Private univs tend to advertise more than state univs and hence there is this perception that they are better, so you need to look outside the media and talk to profs to figure out what is best. eg reaction engineering at univ of delaware is top-notch even though overall ranking of delaware is poor.

|  |  |  |  |
| --- | --- | --- | --- |
| No. | University | Field | PhD/MS/  Combined |
| 1 | Carnegie Mellon University | ChemE | PhD |
| 2 | Massachusetts Institute of Technology | ChemE | PhD |
| 3 | University of Wisconsin-Madison | ChemE | PhD |
| 4 | Cornell University | MechE | PhD |
| 5 | Princeton University | ChemE | PhD |
| 6 | University of Texas – Austin\* | ChemE | PhD(MS\*) |
| 7 | University of California-Santa Barbara | ChemE | PhD |
| 8 | University of California-Los Angeles | ChemE | PhD |
| 9 | University of Southern California | ChemE | PhD |
| 1o | Purdue University | ChemE | PhD |
| 11 | McMaster University, Canada | ChemE | MS |
| 12 | Georgia Tech | CSE | MS |
| 13 | University of British Columbia, Canada\*\* | ChemE | MS |

It was very tough to rank the univs especially within the top 5. I was lucky to get only one accept from my top 5 so there were no dilemmas. Similarly did not care to properly rank other univs also. The above is a rough list on the basis of my perception after talking to many people.

Canadian univs are generally equivalent to tier 2 univs of USA. They give funded MS for sure.

\* UT-Austin somehow mistakenly took my application for MS instead of MS/PhD and rejected me. I did not care to correct it since I had got acceptance from Wisconsin.

\*\*Did not apply officially to Univ of British Columbia. The prof offered me place over email itself.

3) On what basis did I choose the universities?

a) Talked with seniors[very imp] and saw their preference lists

b) Talked with faculty and students at IIT and McMaster University where I interned

c) US News/QS ranking are a complete FART!

5) Did I contact profs? How useful is this? Any fundae regarding those?

I did send some emails to some professors, asking about possible research group opportunities. I asked them if they had open positions since they were the sole people in those particular univs with whom I would be interested in working with. If they did not have open positions, I could then have saved my application money. Generally profs in US do not reply back so I was very unmotivated to send any emails in the first place. I sent total 4 emails:

1. Prof Rawlings(Wisconsin)- No reply.

2. Prof Joe Qin(USC)- Replied back that he would nominate me for outstanding PhD student fellowship and urged me to apply immediately.  
3. Prof Christophides(UCLA) - No reply.

4. Prof Bhushan Gopaluni(Univ of British Columbia)- Contacted him in November. He showed interest and asked me to stay in touch. Told me he planned on to take PhD students to which I insisted I want to do MS only. He then asked me for my availability for MS in Feb to which I declined because I was then going to Wisconsin. He would have surely taken me for MS had I said a yes to him.

6) What were my other options? JOB(where), IIM? Etc

I chose not to sit for placements. Didn’t give CAT either. Would have gone to IIT-Madras in worst case for PhD. Had already talked with faculty there. Might have done RA in IIT and applied again to US/Canada. I was very sure that I would make to at least some univ in Canada because I of my MITACS Globalink internship. Also when I was in Canada I was generally told of an opportunity to work in a company in Toronto while earning MS at McGill. I might have taken that option too, but it was not a formal offer.

7) Which app am I choosing? Why?

I chose University of Wisconsin-Madison. Excellent university for controls and ChemE in general. It was my personal preference 3. Patwardhan sir told me that I was an idiot to have put it on rank 3, as it should have been my first choice since the faculty there in controls is the best, actually a tie between CMU but still Wisconsin on better side because the best faculty would also take me in as a student which might not happen in CMU due to severe international competition between new PhD students. However I gave 60% weight to profs and 40% to University ranking so decided CMU and MIT to be above in preference list.

8) What was my BTP/DDP/MTP Topic? Guide? Seminar guide? Why choose him?

My BTP was under Prof Mahesh Tirumkudulu. He is a very nice guy and very much approachable. I wanted to work with a young prof so that she/he could give me time. I also wanted to see if I was interested in fluid mechanics. Mostly my decision to work with profs at IIT-B has been more to do with their approachability and friendliness than the value of their reco.

9)Am I earning and saving enough in my studies currently.

Pretty much. It’s sufficient. Minimum savings that can be sent over to India-INR 4 lacs per annum. If I do internships I can earn/save more. So given this savings, at least I am pretty sure that an app is monetarily equivalent to joining a job at Reliance, with the added benefits of a degree and residence in a hygienic first world nation.

Starting salaries of PhD in ChemE in 2013 are of the order of $120 thousand per annum, which I feel is good enough to wipe out any loss on savings in the 5 year study time. Moreover we can look at a PhD as a vacation taken at the appropriate age of 21 rather than at the age of 60 after accumulating wealth. I personally would like to go for hiking/adventure/new experiences etc when I am young not when I am old. Also PhDs retire later than other people. So the added years still make your professional life to be 40 years hence by the time you will go to your deathbed you would have earned if not more but at least the same amount of money had you been doing job in India. We do not lose money primarily because we are moving from a INR economy to dollar economy. Had we been born and brought up in US, then statistically a PhD would have led to loss of earnings in the first 10 years of career. Comparing the rest of the 30 years is very subjective since the success[earnings] of people is very much dependent on their own attitude/background/hard-work/outlook.

There are many MNCs now which have opened their research centers in India and are nice places for PhDs to work[eg Shell, GE, HURC etc].

11) Any other inputs/comments concerning app?

Make sure you keep in mind all deadlines. Not many people app so no one is there to push you and remind you about upcoming deadlines.

Register for GRE/TOEFL fast. If you wait for sem 7 to register then you will have to go to places like Pune/Ahmedabad etc.

**Extras**

Go for a PhD!! Remain a student. Enjoy the carefree life. Why slog your ass off in a shitty office with 50 year olds! Travel the world, have a new experience. You are already in top 0.1 % of the engineering domain, why leave it and start a new fight in a domain where you probably are not even in the top 10%? As long as you are in top 5% or so of any fields you will earn enough money.

**Some links**

1. X+1 Syndrome: <http://www.cs.ucsb.edu/~koc/favs/x+1.html> [Just for fun]

2. Grad school talk: <http://www.cs.cmu.edu/~harchol/gradschooltalk.pdf>

3. PhD Grind: <http://pgbovine.net/PhD-memoir.htm> [A must read]

4. The disposable academic: <http://www.economist.com/node/17723223>

The above article-disposable academic is very skewed and sensationalist in nature as is the case with most media. Though I would agree with that article for PhDs in liberal sciences/arts/humanities, at least for ChemE there is more than enough demand worldwide. ChemE PhDs are stalked by recruiters over years and generally have job offers in hand much before they graduate. Very few PhDs actually go to academia, most end up in industry with half doing research and going on CTO track and the other half attending small management programs[2-3 months] and then rising up the corporate ladder-CEO track. If you look at the top management of most big companies(eg Reliance, Shell) almost all CEOs, Board of Directors etc are PhDs in some field or the other. Now there is this trend in US(which means worldwide :P) that people beyond the age of 35 are not promoted in organizations/corporations like world bank, IMF if they are not PhDs. I got this information from first hand experience of batchmates of many of my cousins(IIT+IIM combos) who are in this age group. This point about promotion is actually quite logical. As I always cite the example, say you have to promote only one from Techfest manager and MoodI CG, whom will you promote? The ans is non trivial since both of them are competent in their own way and if we put them in a position where delivery is needed both will work well. So the simple/convenient solution is to promote the one who has more degrees. In 1980s B.Tech was enough, in 1990s MS was good, in early 2000 MS+MBA gave people an edge and now with more and more people attending college, a PhD is essential for you to stand out of the crowd.

PhDs are specialists in a very narrow field and lack the broad outlook needed to be a good manager.[FALSE] :This assertion is very naive and is generally quoted by many people as an excuse to not do PhD. PhDs who only know about a very narrow topic and nothing else are failed PhDs because this essentially means that they do not know where/how their work fits into the big picture and the importance of it. One of the prime reasons why people do PhD is to develop the ability to analyse truckloads of information. Its like an intellectual gym. Coming to IIT for B.Tech and preparing for JEE definitely sharpened our skills, now exercising them further is definitely a plus. I understand that this requires patience and perseverance but that is what is rewarded at the end of the day by all the elderly [CEOs, CTOs, recruiters etc ]. If you were to talk to really nice professors or PhDs who are working in industry or as advisers in government committees you will be astonished at the breadth and depth of their knowledge! I would strongly recommend reading the book PhD grind[<http://pgbovine.net/PhD-memoir.htm>] to better understand this. Its a very common trend that once we have gone into depth of a certain topic its much faster for us to internalise related topics. eg as a ChemE now its easier for us to pick up metallurgy/mechanical engg as opposed to if we would have started them when we were 17 year olds.

**Early exit**

Most PhD programs allow you to exit with a MS much earlier than your actual graduation date. In the US nobody forces you to do something that does not interest you. Although if you exit like this its unlikely that you will be given a letter of recommendation from the guide whom you are leaving. But it does not matter if you are going to take up a job. In the US many people realise that for fields like Materials and ChemE doing a PhD makes sense, so many people who join as MS are also seen as converting to PhD, however the flexibility is there that if you dont feel like spending 5 years in the university you can definitely exit with a MS in 2-3 years. Generally Elec and CSE dept students prefer to do only MS and not PhDs because they have enough good jobs for MS students. For departments like ours(ChemE) it makes sense to do a PhD because it takes a while before one really understands a concept fully.

In my program at Wisconsin, I can choose to get a MS or not. I am required to do 6 courses and write a thesis for my PhD. If I do 10 more courses then I can earn a MS degree, the way we earn Minor in IIT-B. The difference is that the MS degree I earn is independent of my PhD degree, so I may discontinue my PhD and just exit with MS. This is of course not encouraged since the department funds you with the expectation that you will commit yourself fully towards PhD for 4 years, but practically 1 out of 10 PhD student deliberately fails qualifier exams so that the university itself gives the person a MS and free him from doing a PhD. But as I said before, once you are in US, you will realise that it makes financial sense to do a PhD in ChemE, so you will automatically want to do a PhD.

**Typical timeframe for completing PhD**

It generally takes 3.5 years to complete your thesis. In the last 0.5 years generally people chill out visit parents, choose which job to take from the plenty of options they have. So in total 4 years. If you are enrolled in a MS program, it takes one additional year. Some univs like MIT, Stanford mandate your doing MS, while some other univs do not compell you to do a MS(eg Wisconsin). I feel this time frame is not too long also given that for a good MBA from US univ one typically needs to slog in an average job for 2 years for experience and then studies MBA for 2 years making it 4 years. A PhD also gets over in 4 years so the time spent is the same. MBAs typically have to pay INR 50-60lacs as their fee so when they take a job they are in debt while its the other way round for PhDs(they get money for doing PhD). In any case of course the two tracks initially are very different but my only point is that one should not do an MBA just because one thinks its faster to do it.

**Funding scenario**

So as it turns out counter to our intuition(trend in India), on an average chemical engineers are the highest paid engineers in US/Canada. Even more so than the average CS/Elec person. Its only a few companies like google which pay a lot of money to freshers, but for other companies ChemE PhDs take the limelight. I would say this is primarliy because of the oil sector and bulk chemical companies. Now of course even speciality chemical companies are paying very well. Even the stipends for ChemE PhD students is highest in US/Canada.

When I was interning at McMaster Univ, Canada this is how the stipend were there in that univ. For any non ChemE $900 per month, ChemE-$1200, controls ChemE-$1500 per month. At Wisconsin-Madison, ChemE is copiously funded while Elec dept even hands out unfunded PhD offers to IITians.

**Difficulty of getting admits**

I would rate difficulty of getting admits as follows MS(funded)>PhD(funded)>PhD(unfunded)>MS(unfunded). So if you are daugher/son of a rich dad/mom, then you may want to apply for unfunded MS and its very likely that you may end up at a top-notch univ. Certain departments are very selective in the studends they take in. eg UCSB does not take MS students, it only takes PhDs. CMU takes only 12 PhD students every year, while Wisconsin-Madison,MIT, Purdue, Minnesota are big departments so they take around 25 PhD students every year. I am not sure about the no. of MS students in ChemE in these places. I havent come across a single student going for MS in ChemE at Wisc till now(May 15, 2013). Probably once I reach US I will get that info.

**Whether your profile is good to get into a PhD program**

This is a very difficult question to answer, since everyone is a stud in their own way. I would just say that for higher studies extra currics do not matter. All that matters is your CPI, projects(recos), papers(if any). GRE/TOEFL are also not very imp for IITians. I think class rank does make a difference to which univ you get selected to, however in the past there have been cases wherein DR 14 or so has cracked Berkeley for PhD because she/he had done excellent projects in IIT in the exact same field as her/his PhD topic was to be in.

**Which field to apply in for PhD**

This is a very tough question and I had to ponder over it for months. Quite frankly the decision will be slightly similar to the way you choose ChemE after JEE. You will not be completely informed but your decision will be right given the information that you have that point of time. I choose controls, because this gave me some breathing space to look at problems from non-ChemE domains also(automobiles, aircrafts, electrical etc). Moreover there are wonderful jobs available for Controls people in the industry especially in bulk chemical/oil-gas industry. Fluid mechanics also have excellent jobs available in US. You should do projects in the same field the one in which you want to do a PhD. While writing your SOP you will realise it becomes very difficult to justify why you want to work in a specific field unless you have prior experience in that field. However once you do land up in a univ it does not matter what you wrote in your SOP and you can choose any prof to work with. Taking my example, all my UG projects were in controls/fluids so I apped in these fields, and ranked my univs accordingly(CMU, Wisc best in controls). Now that I have got admit at Wisc I can go and work in any field(Bio etc), however if I knew a priori that I wanted to do Bio, then perhaps Berkeley(Computation bio) and MIT(drug delivery) would have been the best places.

**Private vs State univs**

If you look at US NEWS rankings and other rankings you will realise that private univs are much higher ranked than most state univs. This is because of the glamour associated with the brands. This however matters only in UG and not so much in PG. During PG your job is primarily through direct recommendation of your guide so it does not matter where you are as long as you are working with a top-notch prof. Private univs are always a step ahead of public univs in terms of their advertising so its expected that you will hear words like Columbia, Cornell a lot more than you will say about New York State Univ. By the way Stern school of management- NY, and Chicago booth school of management are one of the top MBA schools inspite of them being public. They have some of the best faculty members, but still ofcourse you hear about harvard and stanford business school a lot more primarily because they are private and there is this glamour associated with places which are very expensive(not always selective) to get in. Money does bring glamour along even if its the students who are paying it :P

I did feel a bit in the starting that when I got rejects from CMU, Cornell that the brand names are gone, but when I actually looked at placements etc I realised that it had no forbearance to the brands unless of course you want to start a career in McKinsey or BCG again after your PhD(in engg) which many people from places like MIT do.

**Requirement of Publications for PhD/MS app**

For applications from UGs, publications are not expected. They are expected to study courses and get good GPA. However if there is a publication it is definitely a plus. Most profs in US however shun off your papers, saying that perhaps you were just around some grad student in Europe and because you were around at just the right time when a paper was being written that is why you have become a co-author. So unless you are the first author of a paper, your co-authored papers do not suddenly make you the best contender. Is it still worth having papers as 2nd-3rd author-obviously. They are only positive not negative, but not so much that they will mitigate a bad GPA. Its the recos which are the most important and they can make/break your application.

If you are working as a RA after completing your B.Tech or you are a M.Tech then papers are expected and your application is scrutinized accordingly. The funda is the profs want to know how good a person is doing within her/his setting. So within what is expected from a B.Tech, is she/he doing good enough, same goes for M.Techs and RAs.

**Importance of GPA**

Many people ask me if they can app if their GPA is not very high. I personally feel after talking to profs at IIT, US univs, Canadian univs that what the people judging you application are looking out for is a single reason for you to get the app. They are not there to reject you but to find out that at least single attribute that proves that you have in you what can drive you through 4 years of mayhem(academia). For some GPA may stand out, for some it might be a very nice reco, for some it may be a solid publication. People are very forgiving and some univs even ask you for your third yr GPA separately because they believe by then you would have been sure of what you want to do in life and your actions would be in harmony with your aspirations. So just make sure you have at least one attribute that you can showcase through which you can prove that you are intelligent, hard working(basically PhD material) and you will be through. It is better if you discuss your profile with alumni and figure out which univs are likely to offer you positions and apply to those. There have been many cases of low GPA students getting excellent offers, but that does not mean that GPA is not imp. It only means that every application is different and needs to be judged in its own individual way.

**MS vs PhD**

MS is a professional degree which will basically help you get into the american economy. It does not have much technical value for IITians because we have already attended nice courses. I personally dont feel like attending any more classes and basically if I need to know anything I am quite sure I can just read it up and discuss with people so a MS is very boring for me, but some people may want to do it if they want access to jobs in US/Canada. Typically after a MS you will initially get routine technical jobs which can be very interesting. I am calling them routine because they are more of sustenance in nature eg implementing well known algorithms to a different scenario etc.

For a PhD only 4-6 courses need to be done. In my case at UW-Madison, I am enrolled in a PhD program for which I need to attend 5 courses and write a thesis. If I want a MS separately(no link with PhD) I can do so by doing 10 additional courses. At any point of time I can claim that MS degree(like a minor in IIT-B) but I need not complete my PhD to get that MS degree(unlike minor in IITB which requires graduation in major). I can always take the MS degree and quit my PhD program, however that is generally not very ethical as I have promised to do a PhD but legally no-body can stop me from it. If I do have a genuine reason to not do my PhD I can alway share that opinion with my guide and as the culture is in America nobody forces you to do something which you do not want to do. For the guide if she/he has a student who is unwilling from within to do a PhD there is now way she/he can make you do it, so its better to let go of the student and take another one in. On the flip side there is not much reason to actually ditch PhD, because jobs are way better for PhDs than MS people. PhD is a research degree and the jobs which one gets through after being recognized as capable of independent research are more “creative” in nature. You may possibly be the only one in the world working on those problems and you will be employing MS people to do routine works for you eg you suggest implementing some algorithm and the MS person will do it, while you sit back and focus your energy on the results you get. Also nowdays if you scrounge through linkedIN, you will realise that for more and more best paying routine technical jobs too now PhD is required primarily because of an oversupply of PhDs.

Many seniors who went for MS in other departments like Aerospace too convert to PhD because they see opportunities are far greater as a PhD.

If however you want to do a MBA then its a tough decision and you may want to think about doing a MS to enable you to get a job in US which can fetch you the work experience required to crack top schools. Also a PhD with MBA is generally not much heard of, since after doing PhD no body really thinks about you as a label of degrees. As a PhD people will hire you for your analytical skills and for your ability which you have already demonstrated to contribute to technical literature. Its something similar like IAS officers in India being poached at executive positions by Indian companies for their ability and understanding of the government system. Similarly PhDs are hired because they know the inside story of publishing papers/conferences so they know exactly from the academia world what all can help the industry. These are very important decisions and can make or break the whole industry. eg say in the oil sector if you take one wrong decision with regards to oil well(pumping in too much brine to ooze out the oil), the whole oil well can get spoiled leading to trillions of dollars being wasted. These kind of decisions are taken by PhDs who are expert in the art and are thus indispensable. Once this decision has been taken then a MS personnel will swing into action and complete the job. I do not mean to disparage the work of MS people. Doing this kind of work can be daunting in many industries but in general jobs that PhD people have are much more demanding and respected because of a crunch of erudite people who have the ability to take such colossal decisions on the basis of sound theoretical/practical understanding.

I would like to emphasize that getting a very interesting job is subjective and doing a PhD for it is a more mainstream way of getting there. Similarly for high level management positions generally MNCs tend to promote PhDs, but there are always a few non PhDs too who call the shots. People who are not PhDs can surely prove their mettle and get those jobs. Its the same way as whether one should go to IIT or not. Going to IIT is a more main stream(set) way of becoming successful but that does not mean that non-IITians are not succesful.

Best bet: If you have a lot of money then go for MS in ChemE at top places like MIT etc. If you are funding yourself then most schools will accept you even if your GPA might not be great. Or you can enroll yourself in a PhD program and then decide what you want (MS or PhD) after coming to US and seeing what is best for you. I personally am more inclined towards PhD because of the opportunities I have heard about them, but am open to exit with MS in case I find that too be a better option. There is no point doing PhD just for the heck of it. One should do it only if there is a professional advantage or if the process itself is satisfying and gives a feeling of accomplishment(similar to mountaineering).

Off late- I have not heard anyone from IITs going for MS in US to places like MIT, Minnesota, Wisconsin, UT-Austin. Generally those people do unfunded MS who have not done undergrad properly. Those who have excelled in their undergrads generally go for funded MS in some univs in US(decreasing day by day-I think florida offers partial funding) or mostly in Canadian univs. Most students in ChemE from IITs tend to go for PhDs.

These links might of interest. They show statistics with regards to admission in MS and PhD programs in ChemE at Wisconsin-Madison.

<http://www.grad.wisc.edu/education/academicprograms/profiles/148PHD.pdf>

<http://www.grad.wisc.edu/education/academicprograms/profiles/148MS.pdf>

In my class of PhD starting 2013 there are total 27 people(3 Indians-all IITians).

**Which exams to write for applications to US/Canada**

In general you need to write GRE and TOEFL(iBT) for your applications to US and Canada. IELTS is not needed. You can look up the webpages of these exams

1.<http://www.ets.org/gre/>

2.<http://www.ets.org/toefl>

It is recommended that you write these exams by semester 6. In some cases you may want to write it in 3rd yr summer or maximum by first month of sem 7. You should be proactive and book the dates for your exam asap otherwise you may have to travel to nearby cities like Ahmedabad or Pune to write these exams.

TOEFL does not require any preparation for most people and is in principle same as the english proficiency test conducted by IIT during first year. For GRE I personally recommend the book “Word Power Made Easy: by Norman Lewis” (<http://tinyurl.com/pz5afda>) for preparing for GRE.

I would recommend looking at the webpages of university to figure out information on how to fill their MS/PhD applications. Its very straightforward.

Scores of GRE/TOEFL do not matter much for IITians but that of course does not mean that you party and wreck your scores. If at all you are not focusing on these exams then you should put all your energy into increasing CPI or doing nice projects with profs. I personally feel a score of 110/120 in TOEFL is safe. Similarly anything above 320/340 in GRE is safe. If you get 310-320 in GRE then you may want to rewrite but talk to seniors and it will be better to decide it on a case to case basis. If its below 310 I would personally recommend you write the exam again to be on the safe side. These nos. are just what I personally feel to be accurate but I have not verified them with profs in US so dont take them as hard boundaries. I would suggest get highest possible scores. Preparing for GRE was personally very helpful to me. I read english for my own future self [communication abilities are the key] and also happened to do GRE well.

**When to take recos**

Most univs will allow you to make a login ID for your application by September starting. Take a login early and send out requests for recommendations to professors in september itself. That way you can always go to the prof in november and tell him that the request is pending for 2 months! :P

If you wait and send the reco request by say Nov it will be too late and most profs will overshoot deadlines. You have no idea how much a pain it can be at times to get the profs to upload a reco for you. A few profs of course are very professional and will upload the reco in time but for them too, it will be nice on your part to give them ample time so that they can plan their calendar well. If you dont give enough time to profs they will write your reco in a hurry or worse use the standard template for you.

**Ranking the unvis**

Now ranking the univs is a very tough thing to do. I will recommend that you rank the unvis in chunks. eg rank univs within groups of 4-5 and ranks the groups themselves in tiers. eg for ChemE: MIT, Princeton, Minnesota, Berkeley will be tier 1, then tier 2 could be Stanford, Purdue, UCLA etc. Dont think too much about perfect ranking(eg UT-Austing vs Wisconsin vs Minnesota), just apply to roughly 10 places which you feel are nice places in your field. Then as and when you get the results you can sort them on the fly. eg what was the point thinking so hard between whether UCSB and UCLA is better in controls given that say you get a reject from UCLA. In this case life will be simple with no dilemmas and you can then happily go with UCSB.

**Withdrawing applications**

When you get results from certain univs early on(eg Jan/Feb) it is very important for you to take responsibility and withdraw your lower ranked apps for the benefit of others(students throughout the world not just IIT-B). This is something which I personally feel is a very wise and kind thing to do. Just getting a decision on some app which you do not care about is no good. You are wasting everyone’s time(your own, profs who read your application) and most importantly you are wasting a scholarship which could have benefitted some-one else and changed her/his life. By getting unnecessary admits you will only stress yourself out since you will have too many options. So sort the results on the fly. I would recommend not holding more than 2 offers

in hand at any point of time unless you are too confused. Dont act over-smart and postpone your decision to attend a school unnecessarily till April 15. This might delay your I-20/visa. Have some compassion for others and let go of useless opportunities. eg what’s the point of an admit at UCSB if you are getting MIT! or if what’s the point of Minnesota if you are holding offer from Wisconsin/CMU and you are applying for ChemE controls. [Minnesota is best in the world for material sciences]

Sometimes there is also a lock situation: eg I know of an example in MechE which happened in 2013. A guy was waiting for admit from Michigan Ann Arbor while he was holding onto Minnesota. The only reason he was holding onto it was because Michigan was just not rejecting/accepting him so he waited till April 15. There was another guy(not at IIT-B) who had accept and Michigan but was waiting for reply from Minnesota which was not able to offer him position because the IIT-B guy was holding it. So both ended up just blocking each other out in the waitlist and finally had to settle for their personal 2nd preferences. Loss to them as well as to univ.

**App to Canada**

I had gone to Canada through the MITACS Globalink program as an intern. Applying to Canada for MS is a very good option for those who do not have the money to afford their MS. There are these MASc programs in Canada which require you to do courses only for one semester and then you are supposed to work on a thesis for the rest of the time. Since this is like a very long intern being offered by the prof, she/he funds it fully. Other advantages of doing a MS in Canada is that the living standards are as good as USA, in fact in many ways better because Canada is a newer country. There is absolutely no racism because everyone is an immigrant. Number of jobs are infinite, in fact Canada is having a very sever deficit in its manpower and hence started programs like MITACS to attract bright students from developing nations(India, Brazil, China, Mexico) primarily with the purpose to make them citizens. You get citizenship of Canada in just 4 years(2 yrs MS+2yrs job). Canadian citizenship means that you can just walk into USA/Europe/UK without any visa...basically you join the league of the first world nations. Canadian univs do not require GRE in general and the best part is that you can apply to these univs in December and Jan(Sem8) after your placements so you know in case you have got a screwed up job this is a good exit option to save your ass. Once you are physically in Canada you have successfully entered the North American economy following which you can easily inch closer to USA for jobs/studies. In fact jobs in Canada are equivalent to those in USA so you may then want to settle down in Canada itself which has much better post retirement medical and other support benefits or come back to India after taking Canadian citizenship so that you can go and live back there with good pension etc from govt once you retire from your job in India.

“All men are created equal but some are more equal than others”-George Orwell in his Novel-”Animal Farm”.

------------

The above are my views and I encourage you to talk to other alumni and take a diversity of opinions before deciding on what is right for you, but do remember that its of ultimate importance that you take each suggestion through logic and not get swayed by how much an alumni is able to impress you within 5 mins of talk. **You will NOT be a part of the mainstream if you are going for PhD and this may give you goosebumps at times. You may feel that placements is the right thing to do, because everyone is doing it. But believe in yourself and go with what you individually feel is right. Do not get under the pressure of being a minority.**

Opinions/disagreements/suggestions/edits to this app guide are welcome(encouraged) as they will help readers get the right information. I do not have any personal ego problems in being told the ideas I am speaking about are wrong. There is a difference between a person being wrong and an idea being wrong. Do take care of that while voicing disagreements.

Hope the above info helps all the readers. You can contact me at [iitdhruv@gmail.com](mailto:iitdhruv@gmail.com) for further questions :)

Thanks are due to Saurabh Vashisht, Mohit Jain, Jay Gandhi, Parul Verma and Vibhore Jain for asking me interesting questions some of which I have tried to answer in a generic way in this document.

-Dhruv