

Apping for Dummies

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Contents

1 Introduction

So you've somehow dragged yourself through 4 years of undergraduate studies, and you find yourself at the crossroads (yet) again – MBA, MS/PhD, IAS etc etc. Perhaps you are really interested in learning more; or you just don't want to do an MBA or go for IAS, which leaves further studies as the only option; or you haven't given much thought to the matter, and having got a decent CPI, are taking the common course of action. Whatever the reason for apping, most likely you will have a lot of doubts about many things and a lot of questions will come up throughout the apping process. This guide tries to answer some of those questions; but be warned that this is based on my experiences and passed down word-of-mouth knowledge and is by no means an exhaustive treatise.

The key to successful apping is planning. Apping is both an expensive and a time consuming process, so make sure you plan well ahead and meticulously. Another very important point is to be realistic, but I'll come to that later. This document is divided into three broad sections – before, during, and after. Although this guide started out for appers in Computer Science, it has ended up being quite general and I hope that people from every stream can find it of some use.

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2 Before

I'll mention this point again and again throughout this article – planning is *critical* in the apping process. So even before you begin apping, you need to put in some time and thought to it. Questions like when to start apping, where to app, do you really want to app etc are handled in this section. Most importantly, the million dollar issue of whether to do an MS or a PhD is also discussed.

2.1 Do you really want to app?

Actually, I'm not a proponent of the reason behind this question, but anyway. Most people would tell you that you should app only if you are really interested in the subject, if you think about problems and issues beyond the classroom and if you do actually want to LEARN.

While that is not wrong, it certainly isn't always practical. I mean, I know many people who had no clue as to what to do after their bachelors, and figure that studying a bit more may give them some more time to figure things out. Besides, good jobs may not be forthcoming right after an undergraduate degree, and who wouldn't like a good stipend just for studying!

My take is that basically, if you have thought out all other options and think that you want to study more for whatever reasons and have the patience and commitment to put in that much work, go ahead with it.

2.2 When to start apping?

You should start thinking about apping around a year and a half before the intended date of joining. So for instance, if you plan to join in September 2005, you should start doing thinking, booking test dates etc around January 2004. Try to take all your tests so that your scores are available (in hard copy) by the time you start filling out applications. This way, you are less likely to have problems in getting your scores reported to the universities as well. I would recommend getting over with GRE and TOEFL by October at most, if you're applying for the next fall. You should finish filling out the online application forms by December at most. (some universities like UWash have a very early deadline)

At the same time, start working on your resume and SoP. And most importantly, talk to your profs for the recos. Make sure you have all the recos done by December, so that by Dec/Jan, you have sent out all the application material.

2.3 Tests

2.3.1 GRE

General Information GRE is the Graduate Record Examination and is required by most US universities for admission. These days, GRE is only administered as a CBT (Computer Based Test). Though you might hear often that GRE is a piece of cake, don't take it lightly. Besides the fact that you are spending US\$ 130 on it, its very easy to mess up your scores if you are not careful.

It is best to take the GRE as early as possible. Try to take it before your 4th (senior) year begins - mugging up the word list will be much easier at that time. It might be difficult to get yourself into that mindset so early on, but trust me, it will pay off tremendously! It is best to get over with the hassle of GRE asap, more so since over the last 2 years the number of GRE takers has shot up and you will have to rush to get a date of your choice. The GRE bulletin can be

downloaded for free from their website, or can be ordered for free from IPEM (see online references below)

GRE is scored out of 1600+6.

Quantitative: 45 minutes, 28 questions

Verbal: 30 minutes, 30 questions

Essay: 30 + 45 minutes, 2 questions

Adaptive Test The GRE CBT is an adaptive test - which is to say that it "adapts" the questions according to your performance. So if you are doing well, you are likely to get harder questions than you would have had you not been doing so well. **Important:** *never ever* try to estimate your performance based on the hardness of the questions that you are getting. These are highly statistical measures and should NOT be used while taking the GRE.

Quantitative The quantitative section is clearly the easiest with mostly 8th grade math. You should try to get full marks on this section - go slow and easy, since there will be plenty of time. Pay special attention to the graphs and plots in Data Interpretation Questions - its easy to make mistake on those! Besides that, this section should be smooth sailing

Verbal Which brings us to the most dreaded section of the GRE - the Verbal section. The bible of the verbal section is considered to be Baron's book on GRE. However, I think that any decent word list should serve just as well. It is not easy to mug up all of the 3500 words - but you should certainly go over the complete word lists at least thrice and keep revising the words from time to time.

Essay I took the GRE in the old pattern, so I really don't know much about the essay section. From what my friends tell me, its similar to the essay in TOEFL, except that its much harder in terms of content and grading. So don't take it too easily - try to write a good essay. Going through the sample essays in the GRE booklet should give you a good idea. Some of my friends scored a perfect 6 on this section, and most people came in the 4.5 - 5.5 range.

Here is some more information (courtesy Abhaya Agarwal): GRE Essay: There are 2 questions.

In first one, you are given a topic and you have to give ur perspective on it. It is not required to write either in for or in against but you should be consistent. There is no one correct position. This is for 45 minutes. As opposed to common perception, you need not give examples from american history for the evaluator to understand ur point. Indian history will do as well. The main stress should be on good points, nice organization, healthy vocab etc. It is the technique of ur writing that is more on test.

Second one is easier. In this one, you are given a logical argument kind of thing and you have to find faults with the argument. These faults will be purely logical like hidden assumptions/decisions reached based on insufficient data etc. Again organize the essay well. Going through the categories of faults that generally appear in GRE essays as given in gre essay book available on campus should see you through easily.

Online references

- [Official GRE website](#)
- [SuperVoca](#) - good site to practice vocabulary. (Mirrors: [SuperVoca.org](#), [SuperVoca.net](#))
- [IPEM, Allahabad](#)

2.3.2 TOEFL

TOEFL is the Test Of English as a Foreign Language. It is designed to test your basic skills in English - including reading, writing, listening etc - hence no special preparation is really required. Basically, you can just walk in and take TOEFL any day you feel like it. You will have things like – an audio clip will be played, and then some questions will be asked based on that; there will be some very simple grammar questions (like sentence completion); some reading comprehension stuff (not the usual questions, but really easy ones like point out the word similar in meaning to some word in such-and-such paragraph) and so on.

Since the number of people taking TOEFL is much higher than the number of people taking GRE (because TOEFL is required by almost every professional going to the US), you better get your dates as early as possible. Besides, since no special preparation is required for TOEFL, I would suggest you take it in your fifth sem itself. But definitely get it over with by October.

The TOEFL bulletin may be downloaded for free from their website or ordered through IPEM, again for no charge.

2.3.3 AGRE

The AGRE or the Subject GRE is not required, but recommended by most US universities, and required by some (this is for CS). Among other streams, usually pure science streams like math, physics and chemistry require the AGRE. Possibly humanities also require – please refer to the GRE bulletin for details.

Here are some a few things about the Computer Science AGRE:

1. Be very sure of your theory: automata, complexity, computability: I think these topics form at least 30-35% of the test.
2. Algorithms: worst and average case performance of the common algorithms, how they work

3. POPL basics, including stuff like lambda calculus.
4. CO material, and some architecture fundamentals.
5. OS material: scheduling, mutual exclusion, virtual memory etc.

There are also lots of questions that can at best be termed vague: these are the type that ask you what type of network the Internet is. The test preparation booklet from ETS is very useful. Go through it in good detail to get an idea of the kind of questions asked and the weightage on each topic. About the course material, I guess the emphasis was definitely more on theory (disc. maths, TOC, prog languages). There were questions on architecture and a few questions on networking. I don't think you should leave out anything, except for tangential courses like AI (if you have taken any such courses). Just go through the rest of the stuff.

2.3.4 The rest

TSE is the Test of Spoken English. Many appers are confused as to whether they are required to take the TSE or not. In most cases, it is NOT required to TSE. However, it is best to confirm with the university that you are applying to.

Some information specific to UIUC TSE is required for getting a Teaching Assistantship at UIUC. You must be knowing this already, but let me repeat it anyway: financial aid from any university is usually in the form of an assistantship. Assistantships are generally of two types: Teaching Assistantship (TA) and Research Assistantship (RA). As a TA, you are assigned to a course and you help the instructor by grading answer scripts, taking tutorials and having fixed office hours in which the students of your class can come to clear any doubts etc. As a Research Assistant, you get assigned to a prof and directly participate in his groups research. It might be debatable, but my personal opinion is that an RA is better.

Anyway, the offer from UIUC comes as an "open offer", which means guaranteed financial support, fees waiver etc., but it does not specify the nature of the offer. Once you accept the offer, they convert it to TA or RA. For getting a TA, it is required by Illinois (the state in which UIUC is) law that you have satisfactory performance on the TSE or SPEAK. SPEAK is a UIUC administered test that one can give on campus here.

But none of us at IITK had given the TSE. So, if no prof finds your file interesting enough to give you an RA, and you haven't given the TSE, they make you something called a Graduate Assistant (GA), which is like a non-teaching TA – doing stuff like grading answer scripts, sys admin of some lab etc. Once they have given you an open offer, they have to support you one way or the other.

TSE is a very easy test. You can give it if you intend to app to UIUC. And there's no hurry. You can give it during the next sem also, if you get admitted

to UIUC. But it's not necessary and if you do decide to come here, with your acads, you would definitely get an RA.

2.4 What universities want?

Universities take into account a lot of factors which considering prospective applicants – you need to think from the Universities perspective to get a better feel. In my opinion, the priority goes something like this:

1. Publications
2. Recommendations
3. SoP
4. CPI/CGPA
5. Test scores

As you can see, test scores count the least – they're just like coarse filters to make a cut-off among the applicants. A decent score in GRE and TOEFL should be OK, there is no need to burn your blood for the tests.

Now, publications are usually not as much under your control as say GRE. Of course if you've been guided properly, you might already have a few papers by the time you app, but in most cases most people will NOT a publication at this time. Which is precisely the reason for its importance. If you have a publication in a good international conference, you can get into the top most schools (like MIT and Berkeley) irrespective of your GPA or resume. Of course, a publication will usually automatically warrant good recommendations as well.

If you don't have a publication, play to your strengths. The next most important document is your SoP. I can't emphasize more on its importance – it can really make or break your selection. I spent a lot of time on my sop and then came up with a totally ordinary looking piece. Reason? – I had already looked at some other SoPs. Moral of the story – *be original!* More on the SoP in section ??

Though CGPA appears low on the list, its a fairly important criteria for most applicants because most applicants will not fair well in the publications or SoPs. So if you've slogged 4 years to be the departmental topper, it WILL make some difference to your application. However, being the topper still DOES NOT guarantee admission into any school. Especially in the last 2 years, the trend has changed dramatically. Bottom line – if you're at the top, its good, but you can't be complacent at that; and if you're not, don't lose heart – you can still make up elsewhere.

2.5 Where to app?

This is perhaps the most crucial step in the apping process. While deciding which universities you want to apply to, you need to take into account a number of factors:

- Reputation of the university in your areas of interest
- Responses received from suck letters (if any) Please refer to section ?? for more details
- Your own credentials
- Other factors like aid, geography, type of program and so on

First off, *do not* blindly follow the US News rankings. Talk to your faculty about which universities are doing good work in your areas of interest and then pick the ones you want to apply to from among these, keeping in mind the US News rankings. Very often, the toppers have the habit of applying to the top 6-8 universities, which isn't in the best interest of anyone. Bear in mind that you're up against a hell lot of people from all over the world and so just being the topper won't get you into any university you like. You want to apply to universities where you have the greatest chances. Take a look at the section "What universities want?" (??) for more information.

Although I've said that you're up against applicants the world over, the worst competition is from within. It is extremely important that you sit together with other people in your department who are applying and figure this out. For instance, it doesn't make sense for the top 5 people to apply to the same top 8 universities. Neither will all the top 5 make it to all the top 8 universities, nor the people below will get any chance. Basic procedure to be followed is this:

1. List out ALL the people who intend to apply, along with areas of interest and recommender name
2. Check out the last few years trend at your college – most universities have their favorites; eg. UIUC takes a lot of IITKians but hardly anyone from IITB applies there
3. Make sure that *at most* 2 people apply in one university from each department; this should be done bearing in mind the areas of interest and preventing any reco clashes

Of course, it's easier said than done. To make sure what I've just outlined works, most of the people will have to make some compromises. After all, why would the topper not want to apply at the top 8 universities? But the secret to successful applying is a little compromise in the common good of all. If each one of you goes his own way, everyone will suffer – including the top ranker.

Another important issue is that of backup universities? And also at how many places should you apply. Most people apply between 6-10 universities, depending on their credentials and/or financial constraints. As for backup universities, I would suggest (from bitter experience) that you have at least 4 backup universities – go as low as you can, and then go a little lower further.

Last, but not the least, your choice of program should also be considered while choosing universities. Whether you want to go for an MS or PhD can have significant impact on your choice – read on the following section to find out more.

2.6 MS vs. PhD

This can be a tricky issue over which a lot of people do a lot of thinking, and in most cases never coming out with a definite answer. Lets get the basics straight first – these days, funding for an MS is *extremely rare*. You *might* get funded *after* you join, but there are no guarantees. So go for an MS only, if you're parents have a lot of dough or you are willing to take hefty study loans. On the brighter side, admission into the MS only program is usually easier compared to the PhD program in any university.

With the PhD program, however, admission becomes tougher. At the same time, in almost all cases PhD students will be funded by the university. Basically, the university is making an investment when it decides to fund anyone. Naturally, PhDs get more funding than MS students because – a) the University expects that you'll do some good research work which will benefit the department directly/indirectly in near/distant future; and b) the university really doesn't expect anyone to be able to bear the expenses for 4-5 years!

A lot of students want the best of both worlds – a funded MS. Since there are usually no “officially” funded MS programs, people came up with a round-about method – take admission into the PhD program, and quit after an MS. Sounds good, doesn't it? Well the bad part is that in many cases, you won't be able to quite without spilling some bad blood – maybe your adviser is not happy with your decision or something like that. Of course, this may not affect you much, but it does make a difference in the long run. So for instance, if for a scholarship, an Indian is competing against a Chinese, more often than not (all things remaining the same) the Chinese is likely to be favored; since over the years Indian students have gained a reputation of not being the sincerest lot. A more direct impact may be felt on the future applicants from your undergraduate college.

So, what are we left with then? Actually, a lot depends upon your adviser. If your adviser is okay with your leaving after an MS, then there is really not much to worry about. Then it also depends on the university policy. In places like CMU and CalTech, you can NOT leave the PhD program in the middle (meaning that you CAN leave, but that will be without any degree). Also bear in mind that while going for a PhD, the priority should be on the research work in your department or your advisor, and not necessarily the university ranking. However, while going for an MS, most people generally give higher priority to the university ranking.

The final decision is of course yours. If you can handle the expenses and are not sure of your commitment, go for an MS. If you know you're made for research, PhD is for you. If you are hanging somewhere in the middle, perhaps the best option is to go for a PhD and who knows, maybe you'll indeed finish it.

If you're still not confused, read on! Here are some of our seniors' comments on the issue:

Arindam well last year most of us applied to PhD... in general funding for MS is a problem... and so PhD is definitely suggested... at least in the univs higher up... the situation might be different in univs lower down the list.

the problem though is that while it is easier to get admitted to MS, it is harder to do so in PhD but then again what good is a MS admit if you don't have the funding!

Some univs do allow you to leave after MS even though it is a PHD program that you are admitted to like Stanford... however some categorically state that it is not possible like Princeton, UWash, Cornell etc. Since I was always applying for PhD, I don't exactly remember which univs said what exactly... best bet is to write to students in the univ you are interested in and find out.

Akhil So, once again the greatest question of all is asked :).

This question really depends on the university you want to apply. As a general rule, PhD is tougher to get into but comes with guaranteed financial support, but MS is easier to get into but difficult to get aid.

Higher universities (perhaps Ambuj, Uttu and Kammo are better experts here) will most probably not give you financial aid in MS, though the admission is easier there. e.g. Raina applied for PhD in Stanford, but was offered admission in MS without aid. In MS, mostly profs would like to see your performance there in a semester before giving you any kind of aid. But, if you are a good student, slightly lower univs might offer you aid like Ashish got from Wisconsin. He got a fellowship for MS (as far as I remember).

Aid in MS will largely depend on how you suck a prof in that university and the result of that effort can not be predicted. If the prof happens to like you and has the funds, he might offer you aid but again no guarantees. Your application might have to be good (with respect to the univ.) to be considered for aid. In Raina's case, the prof he contacted hesitated in offering aid coz of slightly less impressive recos.

But, frankly, I don't see why should you people think about this question unless in special cases. No one has ever heard about someone being forced to continue a PhD program coz he could not leave it after two years. In universities where there is a MS program, I am sure people do leave PhD in the middle. So, why should you not apply for PhD and go for a more risky MS?

The way I see things, if you have the credentials to get into PhD, great. Just leave after two years. If your credentials are not sufficient but might get into MS, you will still have a tough time getting aid.

My advice is apply for PhD except in universities where you might have heard it is difficult to leave PhD in middle like Cornell (it doesn't have MS program).

Kamalika Regarding whether you should go for an MS or a PhD, I feel that it really depends on what you want to do. If you really know that you want to do a PhD, like I did, it is better to go for a direct PhD - you will save an year (as against doing an MS and then doing a PhD). On the contrary if you don't

know whether you would like doing a PhD or only want to go for a MS, then 1) go for an MS or 2) go for a PhD in an university where you can quit after MS. The first option is better - in terms of the prospects of the coming batches.

Sankalp Singh The MS vs PhD issue can quite tricky. It can at times be beneficial to app for PhD as it puts your motivation etc in good stead. It also kinda guarantees that you would get full financial aid (they don't expect you to pay \$30K per annum for five years on sth like a PhD.) On the other hand, the competition for PhD is also tougher, as these are the people who are most important to the profs: producing papers, research output etc. So profs look for better people.

I can see this is not leading anywhere :). This is quite univ specific. At places like Cornell, they don't have an MS program. All they have is PhD and MEng (which is crap, and also doesn't have any option of aid). Then at places like Stanford, there is an MS program, but you certainly won't get aid. So people usually app to the PhD program. At CMU, like Corenll, there's only PhD. And at these places, you can't get into PhD and quit later. CMU does have some MS programs in stuff like Data Mining and AI, but they are not very good.

Another category is comprised of places like: UIUC, Texas Austin, Michigan, UWash etc. Here you can app for MS, and can potentially get aid too. Even if you app for PhD, it is possible (and quite easy) to call it a day after MS—this becomes a little prof (under whom you would be working) specific though. But in most cases it is not a problem. It is also the same at MIT and Berk. So you can app for PhD at these places and get away with an MS. But many people from our batch app'd for MS at these places and got in as easily as people whoc app'd for PhD. So there isn't, seemingly, any advantage in apping for PhD, unless of course, you really intend to do a PhD, in which case it is useful as you would get an offer from a good prof.

Mahim As for MS versus PhD, it's not a very big issue. People sometimes apply for an MS and are admitted to the PhD; the converse is even more commonplace. The Universities certainly want PhD students more, because they can do some useful research and benefit the Univ. However, you are still free to drop out after you get the MS : CMU claims it's PhD completion rate of 70% is the highest around, so that gives you a fair idea of how many get the PhD. I would suggest that you apply for a PhD at the upper-ranked Univs. and for an MS at the lower ranked ones. If you really want the PhD and end up at a lower ranked school, you can always switch after the MS.

2.7 Money matters

There are usually three types of fundings (or aid) given by universities. These are:

Fellowship (FS) This the best type of aid. Basically, you're getting paid for nothing at all!

Research Assistantship (RA) This comes next. As the name suggests, you will assist a faculty member with his research work. One can make productive use of an RA – getting papers published, learning new stuff, bonding with the faculty etc etc. Very often, you’ll be supported with an RA by your guide/advisor

Teaching Assistantship (TA) This is not unlike from the kind of TAship we have in our IITs. Basically you help out in a course – taking labs, grading, making exams – and so on, and get paid in return. Least productive.

Very often, most online applications will ask you whether you are interested in getting university aid (who wouldn’t!). So make sure you will out all of FS, RA, TA (and anything else); in that order, if you are required to indicate any preference.

Typical stipend amounts will be in the range of \$1300 to \$1800 per month, which is usually more than enough to cover all your living expenses. If you are in a place like Texas, you can live royally in 1500. But if you land in California, then 1500 will just about cover you up. There are rare cases, where people get extraordinary amounts in funding, but don’t hope/count on it.

This stipend is *excluding* your tuition fee, which will usually be waived in any kind of funding scheme. Typical tuition fee would be anywhere between \$30,000 and \$50,000 per annum, depending on the university.

As I’ve said before, if you are going for a PhD program, you can be almost 100% sure that you will get funded. Now what type of aid you get will depend on a number of factors – like the funding amount available with the department, number of admitted applicants and your standing among those admitted. The top most people will usually get a fellowship, while others will follow up with an RA or TA. A fellowship is not very common, and even those who get it, usually have to switch to an RA after the first year. Almost all PhD students eventually therefore are supported by an RA.

Getting into a funded MS program is almost impossible these days. Most universities will make it very clear right from the beginning that masters students will not be supported. But there’s no harm in trying. You can try sucking the profs – if it works, a prof may be ready to fund you even for an MS. Very often, MS students arrange for funding after joining – so maybe you have to bear everything on your own for one semester, and during that time you can work out some kind of arrangement. Typically, an MS student may manage a TA either within the department or elsewhere. Getting a RA or FS in an MS is very difficult, if not impossible.

But if you are indeed going without funding, make sure you know what you’re getting into. If your parents can afford it, then nothing like it. Otherwise, be prepared for taking an educational loan. These days, there are excellent schemes for study-abroad loans from SBI, PnB and many other banks. Make sure you have ALL supporting documents when you go for your visa interview.

As far as living expenses are concerned, they vary *highly* from place to place. So its difficult to give a general estimate which would be applicable everywhere.

However, one can safely say that your living expenses would be a direct function of your housing expenses. Typical housing expenses would range from \$200 to \$400 per month.

3 During

While you're filling out the forms (most of them online), you should have your resume, SoP ready and you should get to work on those recommendations. If you have a credit card of your own, that's great. If you don't, make sure you make some temporary arrangements, because making payments online makes the applying process much simpler and faster and allows you to focus more on other important stuff than just filling out application forms.

To start off, make a simple website, simple being the operative word. Strictly avoid fancy stuff like Java, DHTML, JavaScript, ActiveX and so on. Also avoid personal details (horoscopes, favorites etc) and photographs. Put all your professional information on this website – resume, details of projects and internships etc. Now you can simply include the URL to this website in your emails rather than attaching files.

3.1 SoP

The statement of purpose is undoubtedly the single most important document that you will author for your application. So be very careful in preparing your statement. Remember, the SoP should not resemble your resume put in paragraph form. It should convey information which is not available through your resume. A resume is just about facts, while the SoP is about you. So for instance, the resume may show that you did particularly bad in one semester – the SoP gives you a chance to explain why that was so (illness or lack of interest or whatever). The SoP lets you talk about your ideals, philosophy and your dreams.

A SoP typically consists of the following sections:

- Objectives and motivation – this section should focus on why you want to pursue higher education (and how was this decision brought about), and what are your future plans.
- Background and research interest – here you can give some details about your education (like how you got interested in your area), your family background (education, economic status, values etc) and your research interests. You can talk about what you found exciting in your courses, projects and about your internships and publications.
- Other relevant information (extracurriculars etc) – cover stuff other than academics: sports, fine arts, your qualities as a person, your values and so on

- Why you wish to join so and so university – try to give a specific to the point answer. Make sure you’ve done your homework and researched the department well – mentioning specific projects and faculty may prove helpful.

Here are some things to bear in mind:

- BE ORIGINAL! Never, ever copy anyone’s SoP style. An SoP is a very personal document, and should be unique to every individual. It might help to get ideas from other people’s SoPs, but I would suggest you don’t even do that.
- Avoid unnecessary facts – most of these will already be available in your resume.
- Don’t be verbose – a typical SoP should be between 1-2 pages. It would help to keep two versions – a short one, and a slightly more detailed one. Depending on your universities restrictions, you may choose to use whichever is more convenient.

3.2 Resume

Your resume is mostly factual, so nothing much to worry about that. Make sure its short and sweet – no nonsense, and full of information. List out your achievements (academic and otherwise), skills, research interests, publications (if any) and hobbies (optional). Don’t gloat, just state facts. Try to itemize or enumerate as much as possible – NO PARAGRAPHS please!

Whenever you’re sending out your resume in email, send it in *plain text*. PDF/PS might do, but NO MS-Word or HTML! On the website make available all formats – text, PS, PDF and HTML. Always keep your resume up-to-date. You will find lots of sample resumes on the web if you want to take a look at the various styles and designs possible. Again, try to keep it simple. When mentioning awards and achievements, *do not* go beyond high school (so skip everything under 10th grade)

3.3 Reco letters

Ask for recos well in advance. Approach people whom you know, and more importantly, people who know you. Beware of negative recos – yes, it DOES happen, though in rare cases. Make sure you talk things out with your fellow appers, so that each prof is giving not more than 2 recos in each university – preferably just one.

3.4 Suck letters

Personally, I don’t have much experience on the art of sucking, neither was I able to bear fruits from whatever efforts I made :(Nonetheless, it remains an important aspect – one which has brought tremendous success to many people.

Sucking basically means that before you apply to a university, you contact some faculty there who you would like to work with and see how they respond. Many a times, a good suck letter may not even ensure admission, but also aid. So, if you get lucky, you might be able to get a funded MS after all. The responses you get might give you some kind of feedback on your prospects in a particular university.

A basic suck letter would start with your introduction, and then goes on to say that you checked the professor's home page and are interested in his work and that you would really like to work with him given a chance. It is a good idea to throw in some ideas about some specific active project. Don't forget to include your resume (text format) or better yet, just the URL of that website we talked about earlier.

These days people are getting increasingly more sensitive to spamming – so DO NOT send suck letters multiple times to the same guy, and not even to more than a few people in the same department. Before you know it, you would be blocked on their mail server. Also, make sure to check the home page of the faculty before sending out a suck mail – some people are extremely touchy about suck letters and may react very strongly to them.

After sending out the suck letters, keep your fingers crossed, and then wait. If you're lucky, you will get responses within a week's time. If you don't get a response for like a month, then you might want to send a reminder – but then again, be careful.

4 After

This section covers things you need to look into after you have gotten your applying results.

4.1 Visa

The first and foremost requirement is of course the visa. If you're funded, then you needn't worry much – getting the visa should be a breeze. If you're not funded however, then you better consult an agent and plan your documents very very carefully. One mistake could cost you your visa – especially post 9/11 the US embassy has become much more selective.

The procedure is quite simple – just go to ttsvisas.com if you are in Delhi, Chennai or Calcutta zone; and visa-services.com if you are in Mumbai zone. Schedule an appointment online – you will get a receipt with a date and time of your choice which you should print out and keep with yourself in duplicate. But have no doubts, the time on the receipt is of no meaning (as I found out the hard way). Choose the date appropriately – give at least 1 week after you've got your I-20. Since 2003, all information about student's and exchange visitors is being managed through a central database called SEVIS. Make sure from your university that your I-20 is SEVIS compatible.

Once you've scheduled your appointment, start preparing the documents. Its best to put everything in a big folder with separators. If you're on university funding, you will need the following documents:

- I-20 and offer letter
- Proof of property or some other fixed asset (to show binding ties)
- Your undergraduate degree and grade sheet
- GRE/TOEFL scores
- Responses from other universities (especially rejects)
- Visa forms – DS156, DS157 and DS158(for males)

Actually the only critical item is the I-20. But you don't want to take any chances, so carry all possible documents – leave nothing to chance. Its also a good idea to take some bank statements etc to show some extra financial support. If you're not getting funded, then you need a lot many documents – mostly to establish financial ability. Its best to consult an agent in this case.

The US INS has laid out very specific requirements for the photograph. You will find the details on the printed receipt that you get – basically its a 50mm x 50mm picture with white background, head centered in frame measuring between 28mm and 35mm from hair to chin etc etc. But you'll find most studios do such photos regularly, so it shouldn't be any problem.

4.2 Housing

Housing issues and requirements vary greatly from university to university. In places like Texas, on campus housing is more expensive than off-campus, and people prefer to live off campus. Whereas in states like California (where residential land is expensive), on campus housing is much cheaper, but people are forced to live off campus since the wait list for on campus housing runs into years at times!

The first thing you should do is find out who all are going to your university from India. Try to get in touch with these people and get into a group of 2/3/4 so that you can share an apartment when you get there. Next, get in touch with seniors or other acquaintances in your university and talk to them about housing. See if they can make some temporary arrangement for you so where you can stay while you look for a more permanent accommodation; or if they can do some permanent arrangement directly.

Most landlords will ask you to sign a contract/lease before you take the apartment. Typically, you will have to deposit some security money and also pay 1-2 months' rent in advance. The details may vary from state to state but that is the general idea.

4.3 Things to take

I have tried to exhaustively enumerate the things that you should be taking. Though I have tried my best to include everything, the list is by no means complete. Please feel free to suggest any additions.

4.3.1 Apparels and related

S.No	Item	Quantity	Comments
1	<i>Formals</i>		
	Formal shirts	4	
	Blazer	1-2	
	Neck ties	2-3	
	Formal trousers	3	
	Formal belt	1	
2	<i>Casuals</i>		
	Casual shirts	8	
	Casual pants and jeans	10	
	Shorts	4	
	Casual belt	1	
3	Underwear	14	laundry after 2 weeks
4	<i>Linen</i>		
	Bedsheets	2	Double bed size
	Pillow covers	2	
	Light blanket	1	
5	<i>Footwear</i>		
	Formal shoes	1	
	Sports shoes	1	
	Casual shoes	1	
	Chappal / Sandal /	1	
	Floater		
	Bathroom slippers	1	
	Socks	1 dozen	
6	<i>Miscellaneous</i>		
	Traditional Indian outfit	1-2	for festive occasions
	Handkerchiefs	1 dozen	
	Towels	2 big, 3 small	
	Wind cheater	1	
7	<i>Winter clothing</i>		might be better off buying this from US

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S.No	Item	Quantity	Comments
	Sweaters Scarf/Muffler Woolen cap		

Table 1: Apparels and related

4.3.2 Stationary and related

S.No	Item	Quantity	Comments
1	Scissors	2	
2	Tape	1 cello tape, 1 packing tape	
3	Credit card marker	1	
4	Permanent markers	2	
5	Ball pens	6	
6	Course notes and related books		As much as you can gather
7	Books for casual reading	2-3	
8	Handbook for Indian students	1	Obtained from USEFI

Table 2: Stationary and related

4.3.3 Medicine and related

S.No	Item	Quantity	Comments
1	Antiseptic	1 bottle	
2	Bandaid	1 pack	
3	<i>Common medicines</i> Cough and Cold Diarrhea Constipation Fever Mouth ulcer		Make sure you get some kind of prescription for these
4	<i>Cosmetics</i> Deodorant Moisturizer		enough to last a quarter

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S.No	Item	Quantity	Comments
	Hair oil Shampoo After shave Shaving cream and spare blades		

Table 3: Medicine and related

4.3.4 Documents and related

S.No	Item	Quantity	Comments
1	Passport with stamped Visa		
2	All relevant correspondence with the University		letter of financial aid etc
3	I-20 etc	1-2	
4	Grade sheets etc	2-3	
5	Test scores etc		
6	Photocopies of all the above	3 sets	Leave 1 at home and carry 2 with you

Table 4: Documents and related

4.3.5 Cooking and related

S.No	Item	Quantity	Comments
1	<i>Utensils</i> Pressure cooker Extra gaskets and safety valves Vegetable peeler Kitchen knives Spoon, Fork, Plate Microwavable bowls Non stick pan, tava Utensil holder (sanshi) Chakla belan Tea strainer Strainer spoon Kadhahi	2 1 2 6 2-3 1 1 set 1 1-2	 for deep frying
<i>continued on next page</i>			

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S.No	Item	Quantity	Comments
2	Wooden spatulas <i>Cooking material</i> Pickles Spices Specialized masalas Pulses	1-2	take at your own risk!
3	Recipe book	1	

Table 5: Cooking and related

4.3.6 Money and related

S.No	Item	Quantity	Comments
1	Travelers' Checks	required amount	make sure you don't sign them! and have different denominations
2	Hard cash		don't carry too much of this
3	Credit card(s)	1	have the customer care number handy in case of losses

Table 6: Money and related

4.3.7 Utility items

S.No	Item	Quantity	Comments
1	<i>Toilette</i> Toothbrush and tooth-paste Toilet soap and soap case Shaving kit	1	get some extra buttons
	Soap and soap case	2	
2	Screw Driver	Small toolkit	
3	Shoe brush and polish		
4	Mugs		
5	Detergent powder/bars		
6	Sewing kit		
7	Umbrella		
8	Torch/Flashlight		

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S.No	Item	Quantity	Comments
9	Lock and key	2 sets	
10	Plastic bags		
11	Indian postage		
12	Nail cutter		
13	Safety pins		
14	Combs	2	
15	Backpack		
16	Handbags		
17	Big bags		soft bags
18	Passport size photographs		
19	Telephone diary		
20	Can opener		

Table 7: Utility items

4.4 Travel

Since July-September is a rush season, make sure you book your tickets in advance. Most airlines will allow you to block tickets much earlier and you can purchase them at a later date when your plans have been finalized. Please don't try to do all this yourself – go to a travel agent. Believe me, they will save you a lot of money. Also, see if you can avail student's concession. A form from your undergraduate college may help. You may also try using the International Student's I-card. This can be made within a day at the International Youth Hostel, New Delhi (somewhere in Chanakyapuri, pretty close to the US Embassy) for Rs. 200 and a photocopy of your college i-card.

Pack your baggage carefully. Most airlines will allow 2 pieces of 32 kgs each. There are also usually dimensional restrictions (like $L+B+H \leq$ some constant). Try and stick to the rules to avoid any unwanted hassle. If you are changing flights (as you most probably will), make sure you book your luggage straight to the final destination – of course, this is possible only if you're flying the same airlines throughout. Don't carry any knives, scissors etc in your hand luggage. If you have any doubts whatsoever, talk to your agent or someone experienced.

Depending on whether you are going to the east coast or the west coast or somewhere in between, the prices of the tickets may vary from route to route. For people on the east coast, generally flying via Frankfurt-London will be cheaper. While for those on the west coast, flying via Singapore, Kuala Lumpur, Hong Kong etc might be cheaper. So be sure to check out both routes. Flight tickets will typically cost between Rs. 35000 to Rs. 45000, subject to airlines, availability, route etc etc.

While booking tickets, do not try to act smart and do everything on your own. *Go through a travel agent!* Strange as it may sound, but these people can actually save a lot of money for you. If you book your tickets directly with the airline, it might cost you almost twice as much!

5 Resources

5.1 2003 Graduate School Rankings : Computer Science

NOTE: These rankings DO NOT reflect the actual standings of the universities mentioned hereunder. They have been compiled using inputs from various sources. Please use at your own discretion

Rank	School
1	Carnegie Mellon University (PA) Massachusetts Institute of Technology
2	Stanford University (CA)
3	University of California?Berkeley
5	University of Illinois, Urbana-Champaign
6	Cornell University (NY)
7	University of Texas, Austin University of Washington
9	Princeton University (NJ)
10	California Institute of Technology University of Wisconsin?Madison
12	Georgia Institute of Technology University of Maryland College Park
14	Brown University (RI) University of California Los Angeles University of Michigan Ann Arbor
17	Rice University (TX) University of North Carolina Chapel Hill University of Pennsylvania
20	Columbia University (NY) Duke University (NC) Harvard University (MA) Purdue University West Lafayette (IN) University of California San Diego
25	University of Massachusetts Amherst Yale University (CT)
27	University of Southern California University of Virginia
29	Johns Hopkins University (MD) New York University Rutgers State University New Brunswick (NJ) SUNY Stony Brook University of California Irvine

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Rank	School
35	University of Utah
	Ohio State University
	Penn State University University Park
	University of Arizona
	University of Chicago
	University of Colorado Boulder
	University of Minnesota Twin Cities
42	Washington University in St. Louis
	Indiana University Bloomington
	Northwestern University (IL)
	University of California Davis
	University of Rochester (NY)
47	Virginia Tech
	Dartmouth College (NH)
49	University of Florida
	Michigan State University
55	North Carolina State University
	Rensselaer Polytechnic Institute (NY)
	Texas A-and-M University College Station
	University of California Santa Barbara
	University of Pittsburgh
	Arizona State University
60	SUNY Buffalo
	Syracuse University (NY)
	University of California Santa Cruz
	University of Illinois Chicago
	Boston University
67	Iowa State University
	OGI School of Science
	University of Delaware
	University of Iowa
	University of Oregon
	Vanderbilt University (TN)
	Case Western Reserve University (OH)
Northeastern University (MA)	
Oregon State University	
University of Tennessee Knoxville	

5.1.1 Artificial Intelligence

Rank	School
1	MIT
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Rank	School
2	Carnegie Mellon University (PA)
3	Stanford University (CA)
4	University of California Berkeley
5	University of Texas Austin
	University of Massachusetts Amherst
7	University of Pennsylvania
	University of Washington
9	University of Illinois Urbana-Champaign
10	University of Michigan Ann Arbor
11	University of Maryland College Park
12	Brown University (RI)
	Georgia Institute of Technology
14	Cornell University (NY)
15	University of California Los Angeles

5.1.2 Systems

Rank	School
1	University of California Berkeley
2	Carnegie Mellon University (PA)
	Massachusetts Institute of Technology
4	Stanford University (CA)
5	University of Washington
6	University of Illinois Urbana-Champaign
7	University of Wisconsin Madison
8	Georgia Institute of Technology
9	University of Texas Austin
10	Rice University (TX)
11	University of Maryland College Park
12	University of California Los Angeles
13	University of North Carolina Chapel Hill
14	Cornell University (NY)
	University of Michigan Ann Arbor
16	Princeton University (NJ)
	University of California San Diego
18	Purdue University West Lafayette (IN)
19	California Institute of Technology
	University of Utah

5.1.3 Theory

Rank	School
1	MIT
2	UC Berkeley
3	Cornell
4	Princeton
5	Stanford
6	CMU
7	Harvard University University of Washington
9	Yale University
10	Brown University
11	University of Texas Austin
12	Columbia University University of Illinois Urbana-Champaign
14	University of Pennsylvania
15	Johns Hopkins University
16	Duke University Georgia Institute of Technology University of Wisconsin Madison

5.2 Hindi-English glossary for common items

5.2.1 Vegetables

Hindi name	English name	Picture
Aloo	Potato	
Arbi	Colocassia	
Baingan	Egg plant/Brinjal	
Bathua	White goose-foot	
Bhindi	Lady finger/Okra	
Bhutta/Makka	Corn/Maize	
Chaney ki bhaji	Bengal gram leaves	
Chauli/Chavleri	Amaranth	
Chukandar	Beet root	
Chukka bhaji	Red sorrel	
Dhania	Corriander/Cilantro	
Dhoodhi	Bottle guard/Opo squash	
Flas beans	French beans	
Gajar	Carrot	
Goochi	Mushrooms	
Gowaar phali	Cluster beans	
Gulsuchal	Salad leaves	

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Hindi name	English name	Picture
Halim	Gardencress	
Hari Phool Gobhi	Broccoli	
Jaitoon	Olives	
Kaddu	Pumpkin	
Kakdi	Cucumber	
Kamal kakdi	Lotus stem	
Karela	Bitter gourd	
Kasmi saag	Lettuce	
Khatti bhaji	Indian sorrel	
Kunthroo/Goli/Tondli	Gherkins	
Lauki	Bottle gourd	
Lobia	Cowpea	
Makhanphal	Avocado/Butter fruit	
Masoor bhaji	Khesari leaves	
Matar	Peas	
Mirchi	Chilli	
Mooli	Raddish	
Muranka bhaji	Drumstick leaves	
Musli/Shatwar/Sootmooli/Halyan	Asparagus	
Palak	Spinach	
Paniphall/Tikora	Arrowroot	
Patta gobhi	Cabbage	
Petha	Ash gourd	
Phool gobhi	Cauliflower	
Pyaz	Onion	
Seeng/Moonga	Drumstick	
Shakarkand	Sweet potato	
Shalgam	Turnip	
Simla mirch	Bell pepper	
Simla aloo	Tapioca	
Singhara	Water chestnuts	
Suvabhaji	Dillweed	
Tamatar	Tomato	
Tinda	Gentleman's toes	
Toraii	Ridge gourd/Zucchini	

Table 8: Vegetables

5.2.2 Fruits

Hindi name	English name	Picture
Aadoo	Peach	
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Hindi name	English name	Picture
Aam	Mango	
Aloobukhara	Plum	
Amjeer	Figs	
Amrood	Guava	
Ananas	Pineapple	
Anar	Pomegranate	
Angoor	Grapes	
Anjeer	Fig	
Anwla	Indian gooseberry	
Bel/Siriphal	Bael/Stone apple/Bengal quince	
Ber	Zizyphus	
Chiku	Sapota	
Falsev	Blueberries	
Jamun	Jambul fruit/Java plum	
Kat-hal	Jackfruit	
Kela	Banana	
Kharbooja	Mashmelon/Muskmelon/Cantaloupe	
Khoobani	Apricot	
Lichee	Chin fruit	
Mosammi	Sweet lime	
Nashpati	Pear	
Papeeta	Papaya	
Pomelo	Chakothra	
Santra	Orange	
Seb	Apple	
Sheh-toot	Mulberry	
Sitaphal	Custard apple	
Tarbooj/Kalinda	Watermelon	

Table 9: Fruits

5.2.3 Lentils/Legumes/Whole grains

Hindi name	English name	Picture
Besan	Bengal gram flour	
Chanal daal	Bengal gram	
Chawal	Rice	
Chhole	Chick peas	
Gehun	Wheat	
Jwar	Oat	

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Hindi name	English name	Picture
Jwar bhusi	Oat bran	
Jwar aata	Jwar flour	
Lobia	Black eye beans	
Makka	Corn/Maize	
Moong daal (dhuli)	Green gram (skinned)	
Moong daal (khadi)	Green gram (whole)	
Rajmah	Kidney beans	
Toor/Arhar daal	Toor daal (?)	
Urad daal (sabut)	Black gram (whole)	
Urad daal (chhilke waali)	Black gram (split)	

Table 10: Lentils/Legumes/Whole grains

5.2.4 Spices

Hindi name	English name	Picture
Ajmoda	Parsley	
Ajwain	Carom seeds/Thym/Oregano	
Amchur	Mango powder	
Dalchini	Cinnamon	
Dhania	Corriander	
Elaichi	Cardamom	
Haldi	Turmeric	
Hari mirch	Green chillies	
Heeng	Asafoetida	
Imli	Tamarind	
Jaiphar	Nutmeg	
Javitri	Mace	
Jeera	Cumin	
Kalaunji	Onion seeds/Nigella	
Kali mirch	Black pepper	
Kardi/Kusumbha	Safflower	
Kari patta	Curry leaves	
Khas khas	Poppy seeds	
Lal mirch	Red chillies	
Laung	Cloves	
Methi dana	Fenugreek seeds	
Rai	Mustard seeds	
Saunf	Aniseed/Fennel	

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Hindi name	English name	Picture
Tej patta	Bay leaf	
Til	Sesame	
Tulsi	Basil	

Table 11: Spices

5.2.5 Nuts

Hindi name	English name	Picture
Akhrot	Walnut	
Badaam	Almond	
Chiraunji/Charoli/Piyala	Cudpahnut(?)	
Kaaju	Cashews	
Khajur	Dates	
Pista	Pistachio	

Table 12: Nuts

5.2.6 Dairy Items

Hindi name	English name	Picture
Dahi	Curd/Yoghurt	
Doodh	Milk	
Ghee	Clairified milk	
Malai	Cream	
Mattha, Chhachh	Butter milk	
Paneer	Cottage cheese	

Table 13: Dairy Items

5.2.7 Miscellaneous Items

Hindi name	English name	Picture
Gud	Jaggery	
Isabgol	Psyllium Husk (?)	
Kesar	Saffron	
Khameer	Yeast	
Maida	Refined flour	
Murmure/Lae	Puffed rice	
Nimbu ka sat	Citric acid	
Phiti Shakkar	Castor sugar	

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Hindi name	English name	Picture
Phitkari	Alum	
Poha/Chewda	Flaked rice	
Saindha Namak	Rock salk	
Sevaiyan	Vermicelli	
Shahad	Honey	
Sirka	Vinegar	
Sooji	Semolina	
Vanaspati etc	Vegetable Oil	

Table 14: Miscellaneous Items

5.3 Web links

- AllAboutCollege.com
- AllAboutGradSchool.com
- TestTutor.com
- GRE-Test-Prep.com
- GRE.org
- [Namit Kumar's US page](#)
- [Kaplan](#)
- Review.com
- [USNews rankings](#)

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