学而时习之：Being a Successful Graduate Student

John Blitzer

With materials lifted from: Jorge Cham, 孔子
Outline

- Applying for graduate school
- Graduate school is about you!
- . . . . And your advisor
- The importance of presentation
Do I want to go to graduate school?

R.H.D. STUDIOS PRESENTS...
The Little Grad Student®

Wow, Cecilia, your papers getting published! You’re such a successful doctoral student!

Yeah... I guess so... but still...

Look at these grades... Aren’t they neat? My transcript’s complete?

Wouldn’t you think I’m the geek... the geek who has... everything...

Look at this lab... Workstations galore... how many computers can one geek ask for?

I got code and compilers aplenty...

I got sensors and op-amps galore...

You want power supplies... I got twenty...

But who cares...? No big deal... I want... money...
Graduate school is training in research. It is for people who love research, scholarship, and teaching for their own sake and for the difference they can sometimes make in the world. It is not for people who simply want more undergraduate courses. It is not for people who are in a hurry to get a real job.

子曰：学而时习之不亦说乎
Which graduate school should I go to?

- Typical answer. The top of the U.S. News rankings!

- Problem: Reporters don’t know anything about graduate school!!

- Better answer. For every school you consider,
  - Choose at least one professor.
  - Read at least 3 of her papers.
Your application packet

- All Chinese applicants have great GRE scores and great grades
- For foreign applicants to American schools, everything is 关系
- Talk to your undergraduate advisor in person!
All graduate students are the same
Actually, graduate school is your time to shine!

- As an undergraduate, you solved problems
- As a graduate student, your main job is to think of your own problem
- The best undergraduates are the best problem solvers
- The best graduate students think of really interesting new problems to solve
Use your strengths

- I am good at learning new languages
- I like historical linguistics and ancient history
- My research area is natural language processing
Take the time to think about a problem

- 周昂数曰：“Doing the right thing is more important than doing things right”
- Before you start coding / deriving

1) Ask “Is this problem worth solving?”
2) Explain your idea to at least 1 other person.
3) Write your idea down before coding it up!
Language modeling: predict the next word in a sentence

有朋自远方 ___?

Language modeling is a great problem for fancy models!

"Is this problem worth solving?"

No: There is so much data (the entire web), that the best language models are consistently the simplest

Example of a bad research

I worked on language modeling for 3 years!
Example of a great research topic

- If I had one, I would be working on it!
- A great research topic is something people need
- A great research topic is easy to explain
- A great research topic doesn’t always involve a fancy model
Your colleagues

• 子曰：不患人之不己知，患不知人也

Example: Your officemate Nikhil wants to go to lunch with you

• Go to lunch with him!

• Ask him about his research!
YOU MEAN TO TELL ME THAT YOU HAVEN'T DONE ANYTHING ALL SUMMER??
I OUGHT TO...

Uh huh.
Uh huh.
NO NO, CHANNEL THE MONEY THROUGH THE DISCRETIONARY FUND.
ALLRIGHT.

Hold on.

Oh...

SOMETHING, THEIR FORGETFULNESS HAS ITS ADVANTAGES.

WE WERE JUST WRAPPING UP?

WELL, SEE YOU NEXT WEEK THEN.

NEXT!
Your advisor: The real story

Fernando Pereira: “诲人不倦”

John Blitzer: “学而不厌”

- Next to you, your advisor is the most important person in graduate school
- Your advisor wants you to be successful!!!
3 rules for meeting with your advisor

1) Be aggressive. Knock on your advisor's door.

2) Prepare for meetings

   - Write down an agenda for a meeting with your advisor.
   - Before the meeting, read your agenda.

3) Listen to your advisor

   - He has much more experience than you.
Presentations

...AND SO, IN CONCLUSION, OUR PROPOSED METHOD INCREASES PERFORMANCE BY OVER 0.0001%.

I WANT TO THANK YOU FOR LISTENING TO MY TALK. YOU'VE BEEN A GREAT AUDIENCE...

ANY QUESTIONS?

YES, CAN I CHANGE YOUR SHEETS, NOW?

www.phdcomics.com
Why are you including presentations?

“I’m here to do research, not write PowerPoint slides!”

Wrong. You are here to contribute to the scientific community

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This is from Lisa B. Marshall

http://www.lisabmarshall.com
Meeting people in the hallway

- First impressions are important
- Some simple steps for the “elevator pitch”
- Also from Lisa B. Marshall
  http://www.lisabmarshall.com
1) I work in the area of “A”

2) Specifically in the field of “B”

3) This field is important because of “C”

4) My specific work is “D”

5) So far the results have shown “E”
1) I work in natural language processing.

2) Specifically, I work on domain adaptation.

3) Much of the data we have for building models comes from specific domains (like financial news). NLP researchers increasingly need to apply models to different domains (like blogs or biomedical text).

4) My specific work uses unlabeled data to learn a new representation for adapting models to new domains. We don’t need any labeled out-of-domain data.

5) So far, we have applied our technique to sentiment analysis and part of speech tagging in NLP.
Conclusions

- **Applying to graduate school.** Remember to really get to know your prospective schools.

- **In graduate school.** Find your own problem, and remember to think carefully about it.

- **Advisors** are there to help you. Spend as much time with yours as possible.

- **Presentation** is an important part of a researcher’s job. Learn to do it well!
Thanks to the following

1) PhD comics  http://www.phdcomics.com

2) 孔夫子. Read 论语 . . . Again!!

3) Lisa B. Marshall
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