Perspectives on Career Pathways (invited talk for FIT Early Career Researchers)

Wray Buntine
Monash University
http://Bayesian-Models.org

Friday 8th November, 2019

The Best Slides on Research/Academia

hard to find too!

Presenting Your Research: Papers, Presentations, and People

Marie des Jardins (dig around to find slides)

AAAI/SIGAI 2017 Doctoral Consortium

Optimising your PhD and your postdoc life

Maria Garcia de la Banda (slides not public)

IJCAI 2017 Doctoral Consortium

Know Your Strengths (and weaknesses)

- theory
- speaking
- management, networking
- business
- development
- teaching and supervision:
 - undergraduate
 - graduate
- entrepreneur

aim for the best, plan for the worst!

Long Term Planning

- family and lifestyle
- health
- being multi-disciplinary
- work with a mentor, and get some realistic role models
- develop application areas
- coding as a springboard
- dig in locally and build a team and develop connections
- be a hotshot in a mid-tier location or a struggler in a top-tier location?
- take the fast track or not-so-fast track

After a Postdoc

- another postdoc
- ▶ big labs R&D
- industry in
 - Australia
 - your home country
 - overseas
- academia in
 - Australia
 - your home country
 - overseas

Considerations

- ► family
- work freedom versus work life
- office politics
- research / writing / teaching / coding
- strengths and weaknesses

Sample Trajectories

- ► Prof. Dinh Phung, Monash (ARC career track)
- ► A/Prof. Julian McAuley, UCSD (overseas academic career)
- Prof. Fang Chen, UTS (industry lab., project lead, then academia)
- <u>Prof. Marko Grobelnik</u>, IJS (development, startups, local talent)

Preparing for Industry

from Maria Garcia de la Banda

Maria's experience with industry says you should:

- Already have industry experience
 - Look for industry internships and placements
 - Participate in research projects with industry
- Sell yourself (specific skills and contributions)
 - Industry seems a bit lost on what AI/IT is and can do for them
- Be a good communicator
 - Get all the practice you can! (talks, interviews...)
- Have experience as a team player
 - Even uni-based team experience helps
- ► Show initiative and leadership skills
 - Extra-curricular activities help demonstrate this

Example Job Description of AU Academic

- Conduct high quality research including publications in world-leading conferences and journals
- 2. Supervise of research students
- 3. Participate in successful **research teams** and foster interdisciplinary research
- 4. Prepare research proposals to obtain competitive external funding
- 5. Prepare and delivery of **lectures and seminars**, including the setting and marking of assessment
- 6. Coordinate and/or deliver **tutorials**, practical classes, demonstrations, workshops
- 7. **Supervise** and mentor of students engaged in coursework and research projects
- 8. Engage in **professional activities**, both internally and externally, including program committees, engagement with industry
- 9. Execute **administrative functions** as required to contribute to the operation of the Faculty
- 10. Attend departmental/faculty meetings and other committees

Preparing for Academia

- get a Turing Award
- get a Fields medal
- better yet, get a Nobel Prize

Preparing for Academia

- get a Turing Award
- get a Fields medal
- better yet, get a Nobel Prize

Sorry, these aren't realistic goals ... but these days, academia is very competitive!

Preparing for Academia

while a postdoc

- get tutoring and teaching experience (as a hurdle)
- practice giving talks (i.e., prepare for "job talk")
- make sure your English is good enough
- take on some research students
- see next slide on preparing for research

Preparing for More Research

- get a spread of 1st/2nd authorship papers
- get lots of joint research going (not just your supervisor)
- work on small grants
- organise workshops at conferences
- get to the important ideas sessions (e.g., NeurIPS Workshops)
- do lots of reviewing
- create a web profile
 - don't forget your coding or other research artifacts!
- join the main professional organisations (IEEE, AAAI, etc.)
 - so you can become a "fellow" later on!

Work-Life Balance



Work-Life Balance, cont.

Would a person who works an extra 15 hours/week get better achievements?

Work-Life Balance, cont.

Would a person who works an extra 15 hours/week get better achievements?

- current management recommendation is you limit work to 40 hours
- we know deadlines requires this be broken
- work becomes increasing less productive as you work longer

Work-Life Balance, cont.

Would a person who works an extra 15 hours/week get better achievements?

- current management recommendation is you limit work to 40 hours
- we know deadlines requires this be broken
- work becomes increasing less productive as you work longer

Can you put a dollar value on the lives of your children or spouse?

Handling Pressure

- exercise, meditation, external activities
- ▶ look after family
- eat healthy (see my webpage)
- stay organised
- prepare hard things early
- prepare easy things late (stops you overworking on them)



