Career in Tech

A rather biased survey
Career in Tech

- Requires a certain amount of thought/planning to do well
- Widespread confusion about life post-undergrad
- Really poor resources
  - Peers are generally clueless
  - Professors are academics
  - Recruiters are manipulative and clueless
Who am I?
And why am I qualified to give this talk?
Ethan J. Jackson

- **Academic**
  - Undergrad at CMU
  - PhD Student at UC Berkeley

- **Large Companies**
  - VMware (Staff Engineer)
  - Yahoo! (Junior Engineer)

- **Startups**
  - Engineer at Nicira
  - CEO/Founder of kelda.io
What do you want out of life?
What do you want out of life?

• Status?
• Money?
• Leisure?
• Family?
• Impact?
  • Technical?
• Social?
What do you want out of life?

- Figure out your long term qualitative goals
- Work backwards from there
  - In 30 years, what job gets me there?
- Don’t think short term
  - Google has free food
  - Facebook is cooler than my friend’s job
  - Oracle will pay 10% more than Microsoft
Career Options

- Engineer
- Product Manager
- Executive
  - Founder
  - CEO/CTO
- Business Person
  - Sales
  - Marketing
  - Biz Dev
  - Investor

Technical ———— Business

- Academic
Engineering
Engineering

- Code
- Consult
- Politics
Virtually every large company ranks engineers on this scale.
• Titles differ between companies (confusingly)

• Roles an expectations are roughly standard
What makes a senior engineer?
Junior -> Senior

- Gradually become more independent
- Find a balance
  - Asking too many questions (bad)
  - Asking too few (also bad)
- Take on larger projects
- Eventually, set your own agenda
Senior -> Principle

- Politics
  - Engineers
  - Sales
  - Customers

- Become well known
  - You’ll be judged on “thought leadership”
How to move up?

• Get Better
  • Learn stuff
  • Listen to feedback

• Change your behavior
  • Learn from your mistakes
How to move up?

- **Play the politics**
  - … but not too much
- **Position yourself as**
  - Competent
  - Nice
  - Team-player
How to move up?

- Threaten to leave (nicely)
- Get an offer somewhere else
- Bring it back to your boss
- You’re now in a special bucket
- Take the raise, or the new offer
A Brief Interlude

Large Companies vs Startups

Finance is destiny
Large Companies

• Financed through Public Markets
  • Demand consistent, predictable growth
  • Demand profits

• Not innovative
  • Innovation is expensive and risky
  • Incremental improvements -> consistent predictable growth

• Sales are more important than R&D
Startups

- Financed through Venture Capital
- Demand explosive chaotic growth
- Extremely tolerant of risk
- Extremely innovative
- Innovate or die
- Extremely fast paced
Engineering at Startups
Engineering at Startups

- Much less formal
  - Same rough hierarchy, but not written down anywhere
- Reputation vs Title
  - Startups come and go … people don’t
- Very different politics
- Much faster career growth

- Much less comfortable
Closing thoughts

• Should I be an engineer?
  • Do you love coding?

• Large company, or startup?
  • Large company == Stability.
    • Low risk, low reward, high expected value
  • Startup == chaos
    • High risk, high reward, low expected value
    • Much more fun
Academia
Academia

Masters?

Undergrad
Learn the basics

PhD
Learn to be a Prof

Professor
Be a Prof

Classes

Research
Masters

don’t
Masters

• Masters degrees are mostly a scam

• Profit center for CS departments
  • UCB thankfully doesn’t emphasize this
Won’t it help my career?

No.
Masters

- Accelerates your career by **1 year**
- Requires 1 - 2 years to complete
  - Plus $150,000 to $300,000 in opportunity cost
- Slightly negative signal
- What’s wrong that they needed a masters?
Masters — Reasons to Go

• You need a visa

• There’s something wrong with your undergrad degree
  • Wrong field
  • Poor grades (< 3.0)
  • Unknown undergrad institution

• You succumb to family pressure

• Failed PhD Student
PhD

Should I get one?

Likely no.
PhD

• All about research
  • Do you *love* research?
• Extremely uncomfortable
  • Insane amount of work
  • Emotionally intense
• Massive opportunity cost
You should get a PhD iff

- You *really* want to teach at university
- You *really* love research
- You *really* don’t want a boss
- You’re willing to ignore me and do it anyways
Product Manager
Product Management

- Customers kind-of know what they want
- Engineers know how to build things
  - But hate talking to users
- Product Management bridge the two
Product Managers

• Talk to customers *a lot*
  • What do they *really* want?
• Somehow convince engineers to build that
• Also, do a little of everything
  • Marketing
  • Sales
  • Biz Dev
Who should be a product manager?

- Do you care about people more than code?
- Do you like taking to people?
- Do you want to take ownership in the product?
- Do you want to be a CEO someday?
Founder

“The reality is, Silicon Valley capitalism is very simple: Investors are people with more money than time. Employees are people with more time than money. Entrepreneurs are simply the seductive go-between.”

— Chaos Monkeys, Antonio Garcia Martinez
Founder

• A founder is literally someone who “founds” a company
  • I.E. incorporates

• Classically most companies have two:
  • Business
  • Technical

• Gradually emphasis has shifted toward technical founders
What does a founder do?

- Make the company successful
  - Vision
  - Build the product
  - Sell the product
  - Raise money
  - Recruit engineers
  - Management
Should I start a company?

Likely not
Should I start a company?

• A company is a means not an end
  • A vehicle used to push an idea forward
• The idea should precede the company
  • Otherwise you end up with something derivative
How to prepare?

- Have cool ideas
  - Get a PhD
  - Read books
  - Tinker
  - Spend time with smart people
- Learn stuff
  - Technology
    - Specialize if possible
  - Finance
  - Management