Academic to Industry

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Agenda

- Background
- Motivation
- Opportunities
- What to Do and How to Do
- Q&A
- Paths to Software Engineers

• Software engineer at Google 2015/08 - present



http://www.spaceandtime.co.uk/wp-content/uploads/2015/09/IMG_6893.jpg

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- PhD at University of Wisconsin, Madison 2010/09 2015/05



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http://2.bp.blogspot.com/-fcHQyu5laRU/VpJpTAgrWvI/AAAAAAAADx0/Vbt4yzrBx-Q/s1600

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http://www2.csghs.tp.edu.tw/mediafile/1988/introduce/112/2013-12/L_2013-12-25-13-5-54.

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Motivation

Opportunities

- Academic
- Research Labs (e.g., <u>MIT Lincoln Lab</u>, <u>IBM Lab</u>, <u>Microsoft Research</u>, etc)
- Instructors
- Industry
 - Software engineers
 - Data analysts
 - Accountancy and finances
 - Consultants

- Think carefully who you want to be in the first five years after graduate. What the daily life is? What skills/knowledge will be used?
 - Talk to your advisor.
 - Talk to everyone around you, including your friends, and your relatives.
 - Talk to friends of above.
 - Talk to friends of friends of above.

- Go to job search engine sites for job titles and their requirements. Evaluate yourself how quickly and how easily you will acquire those required skills.
 - $\circ \quad \text{Job fair} \quad$
 - LinkedIn (connections)
 - <u>Glassdoor</u> (interview process, salary comparison)
 - o <u>Monster</u>

- Gather people who share the same objective with you.
 - Mock interview.
- Prepare your resume.
 - <u>How to write a resume</u> from Monster.
 - Writing Center or Writing workshop in university.

- Take courses outside of math
 - Machine Learning (Stochastic Process/Statistical Learning)
 - Programming 101
- Join some programs or online courses to prepare yourself
 - Insight Data Science Fellows Program
 - Programs provided by universities
 - o <u>Coursera</u>
 - o <u>Udemy</u>
 - o <u>CodeAcademy</u>
 - o <u>LeetCode</u>



Path to Software Engineers

- Algorithms and Data Structure
- <u>LeetCode</u>
- <u>Cracking the Coding Interview</u>
- Elements of Programing Interview
- <u>Python</u> (Google's Python Class)
- <u>C++</u> (Google's C++ Class) or JAVA
- SQL for Data Scientist (<u>Tutorial in CodeAcademy</u>)
- <u>R/MATLAB</u>