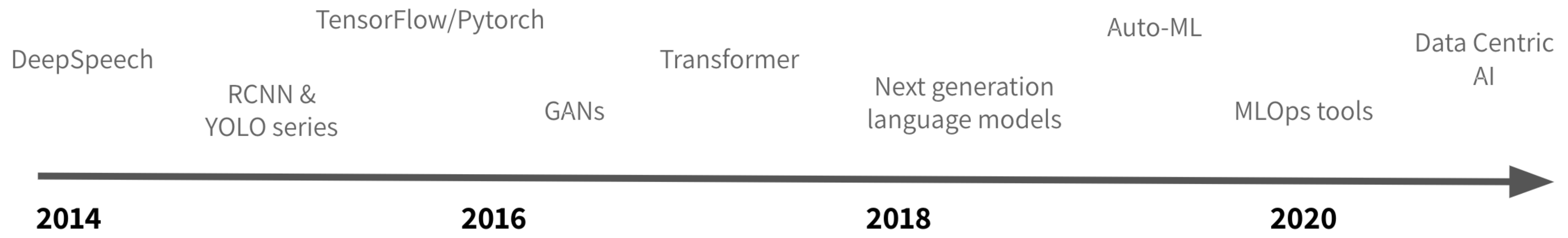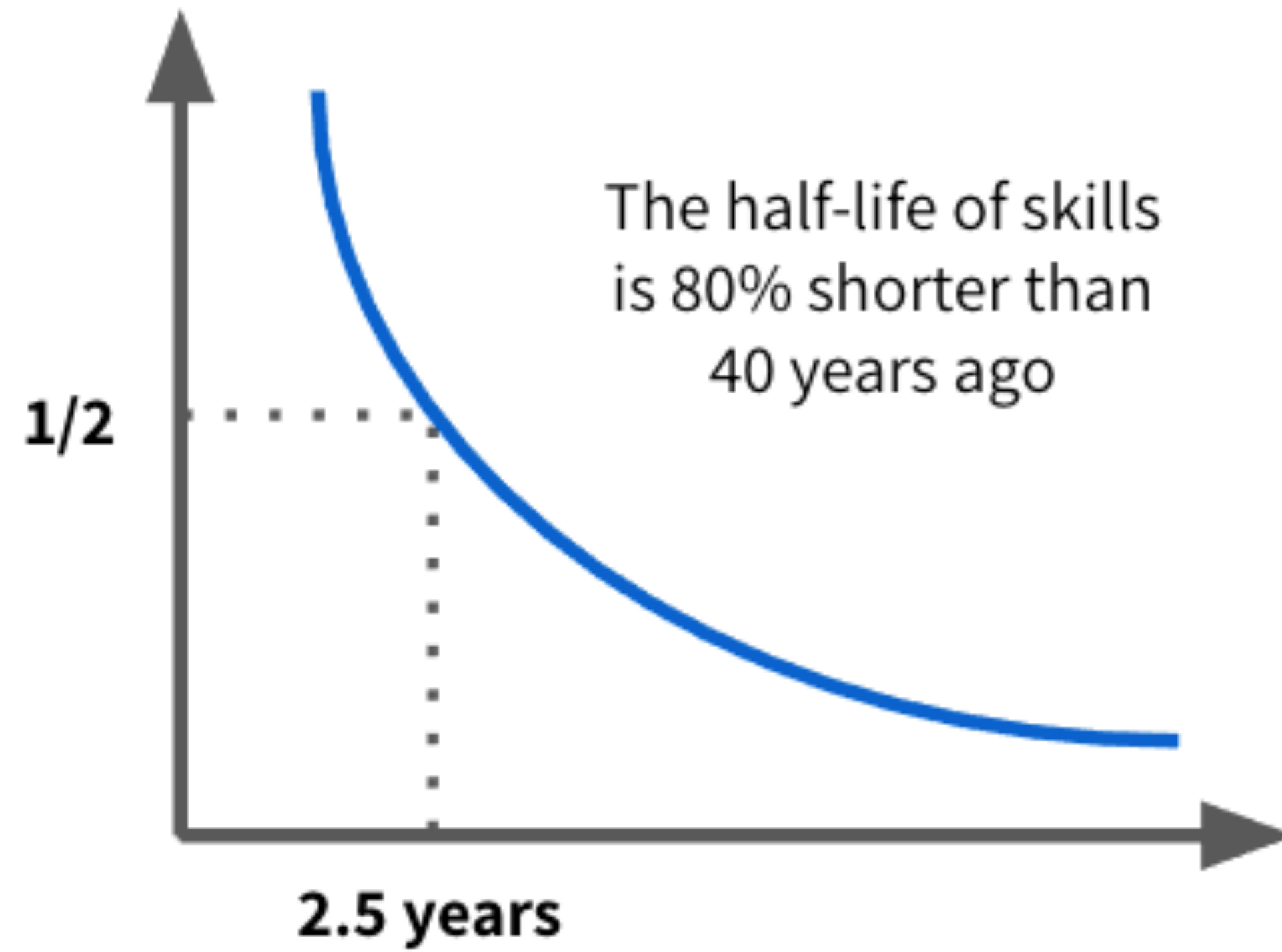# CS230: Lecture 10

Class wrap-up

Andrew Ng, Kian Katanforoosh

I. Continuous Career Development

II. Choosing an AI Career

III. What's next after CS230?

IV. Closing remarks

Kian Katanforoosh, Andrew Ng

The half-life of skills
is 80% shorter than
40 years ago

1/2

2.5 years

TensorFlow/Pytorch

DeepSpeech

Auto-ML

Data Centric
AI

Transformer

RCNN &
YOLO series

GANs

Next generation
language models

MLOps tools

2014   2016   2018   2020

Kian Katanforoosh, Andrew Ng

How to keep up with the latest and greatest?

Precision Upskilling Cycle

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Software as a job category is mature.

AI as a job category is maturing as we speak.

Career pathways in software are better understood than in AI.

Thus, companies write fuzzy AI job descriptions with confusing titles.

Kian Katanforoosh

Mum: You're applying to a machine learning job?
Me: Trying to…

Machine Learning Engineer
Snorkel AI
Palo Alto, CA
via Lever

Machine Learning Scientist
Amazon
Sunnyvale, CA
via LinkedIn

Machine Learning Researcher
Samsung Research America
Mountain View, CA (+1 other)
via Greenhouse

Data Scientist
Waymo
Mountain View, CA
via Glassdoor

Data Analyst
SnowFlake
San Mateo, CA
via Snowflake Careers

Software Engineer
Electronic Arts Inc.
Redwood City, CA
via Glassdoor

Data Science Engineering, Machine Learning
Salesforce
Palo Alto, CA
via Glassdoor

Data Science Engineer, Recent Graduate
eBay
San Jose, CA
via EBay - EBay Inc.

Machine Learning Research Scientist
Capital One
San Francisco, CA
via Capital One Careers

Senior Machine Learning Analyst
Google
Sunnyvale, CA
via Google Careers

Research Data Analyst
Stanford University
Stanford, CA (+1 other)
via Inside Higher Ed Careers

Machine Learning Research Engineer
Embark Trucks, Inc.
San Francisco, CA
via ZipRecruiter

Software Engineer, Machine Learning, Research
Waymo
Mountain View, CA
via Waymo

Data Scientist / Machine Learning Specialist
Genuent Global, LLC
London, CA (+1 other)
via Dice

Senior Product Data Scientist
Bill.com
Palo Alto, CA
via Lever

Product Analyst, Data Science
Google
Mountain View, CA
via Google Careers

Senior Business Data Analyst
Intuit Corp
Mountain View, CA
via Intuit Jobs

Full Stack Data Engineer
Flexion
San Ramon, CA
via WFH Jobs

Full Stack Data Scientist, Supply DS
Wish
San Francisco, CA
via SmartRecruiters Jobs

AI/ML Full Stack Engineer (Quality Engineering)
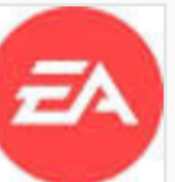Apple
Cupertino, CA
via WDTN Jobs

Software Engineer / Data Scientist, Fleet Analytics
Tesla
Palo Alto, CA
via LinkedIn

AI Deep Learning Software Engineer
Intel
Santa Clara, CA
via TOPBOTS

Machine Learning Modeler, Cash App
Square
San Francisco, CA
via SmartRecruiters Jobs

Companies are confused as much as applicants.

Kian Katanforoosh

It makes it difficult for job seekers to apply to the job that's right for them.

How can applicants find the right role and stand out?

Identify your career pathway and benchmark your skills regularly.

	Data Engineering	Modeling	Deployment	Business Analysis	AI Infrastructure
Data Scientist	████████	████████		████████	
Machine Learning Engineer	████████	████████	████████		
Data Analyst	████████			████████	
Software Engineer-ML	████████	▪ ▪ ▪ ▪ ████			████
Machine Learning Researcher	████████	████████			
Software Engineer	████				████
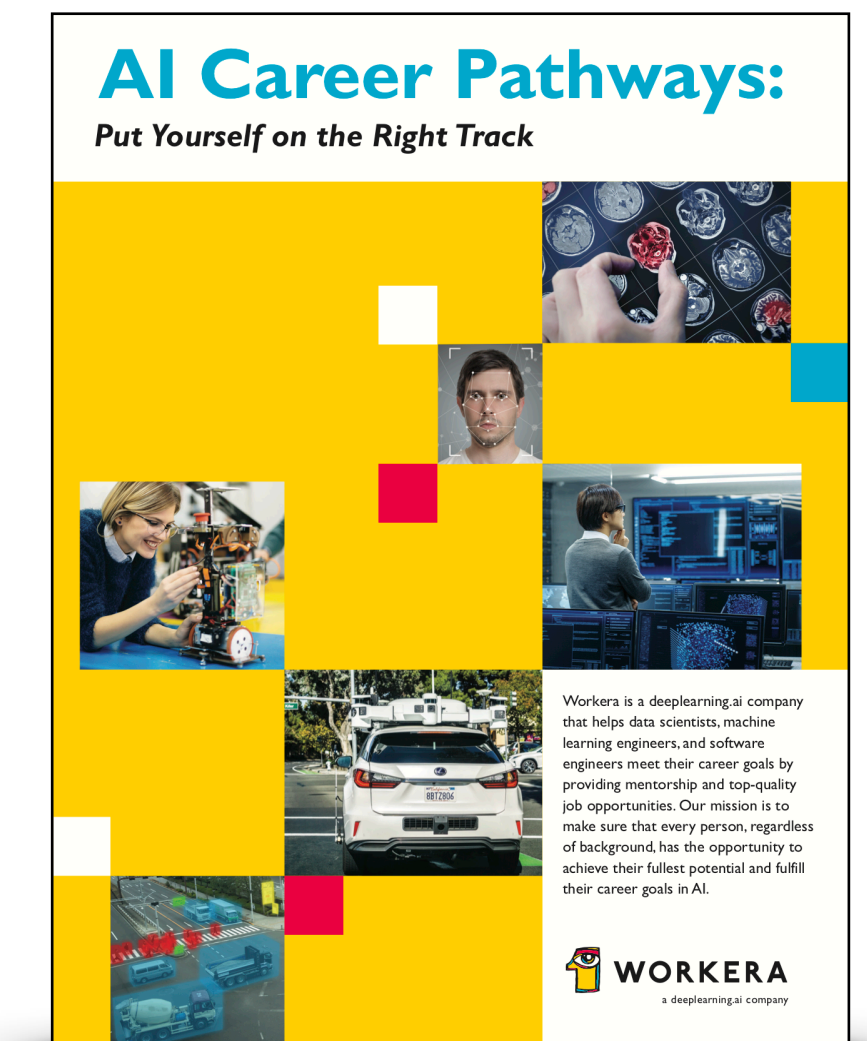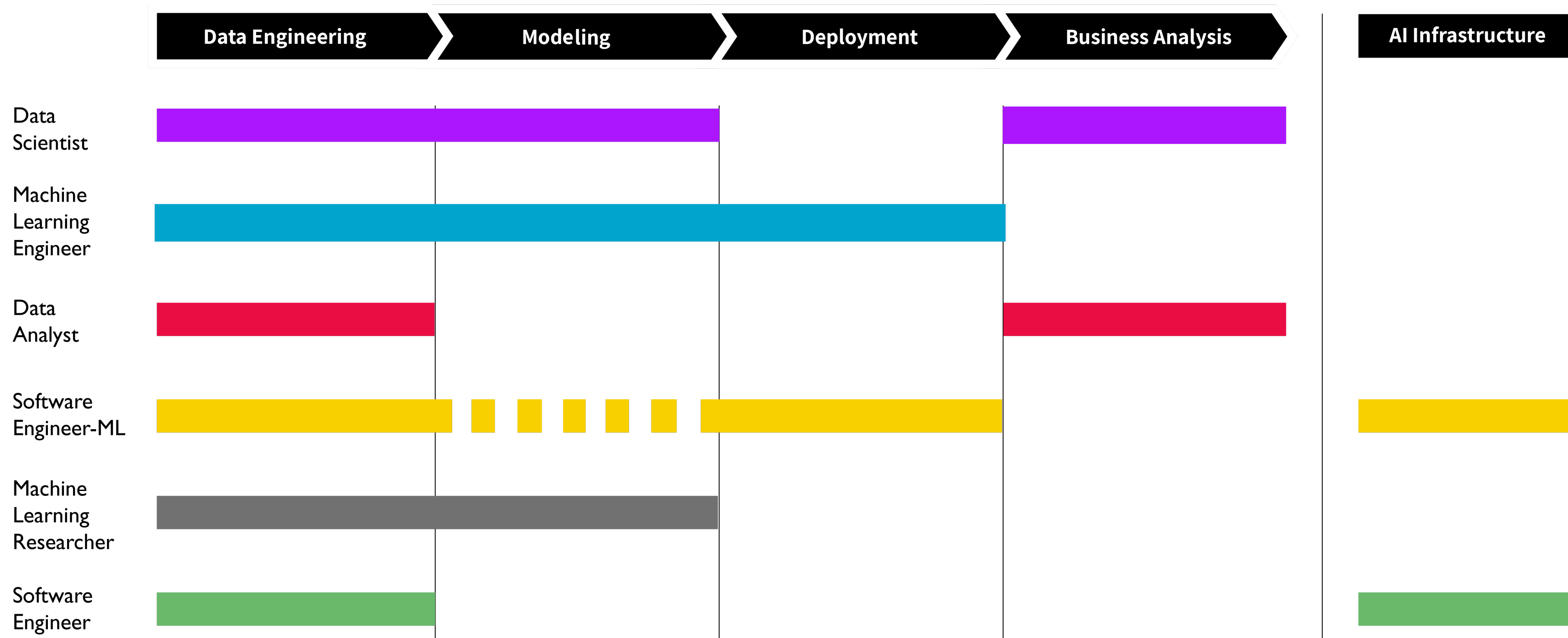
AI career pathways report (2020)

Kian Katanforoosh

11

AI+X: Develop your AI competency in conjunction with your subject-matter expertise.

What is your department?

- Computer Science 32%
- Management Science & Engineering 4%
- Computational and Mathematical Engineering 2%
- Statistics 4%
- Humanities 2%
- Aeronautics & Astronautics 4%
- Business (MBA) 2%
- Medicine (MD) 2%
- Earth Energy & Environmental Sciences 4%
- Material Science 2%
- Maths 3%
- Other 39%

Kian Katanforoosh

CS230
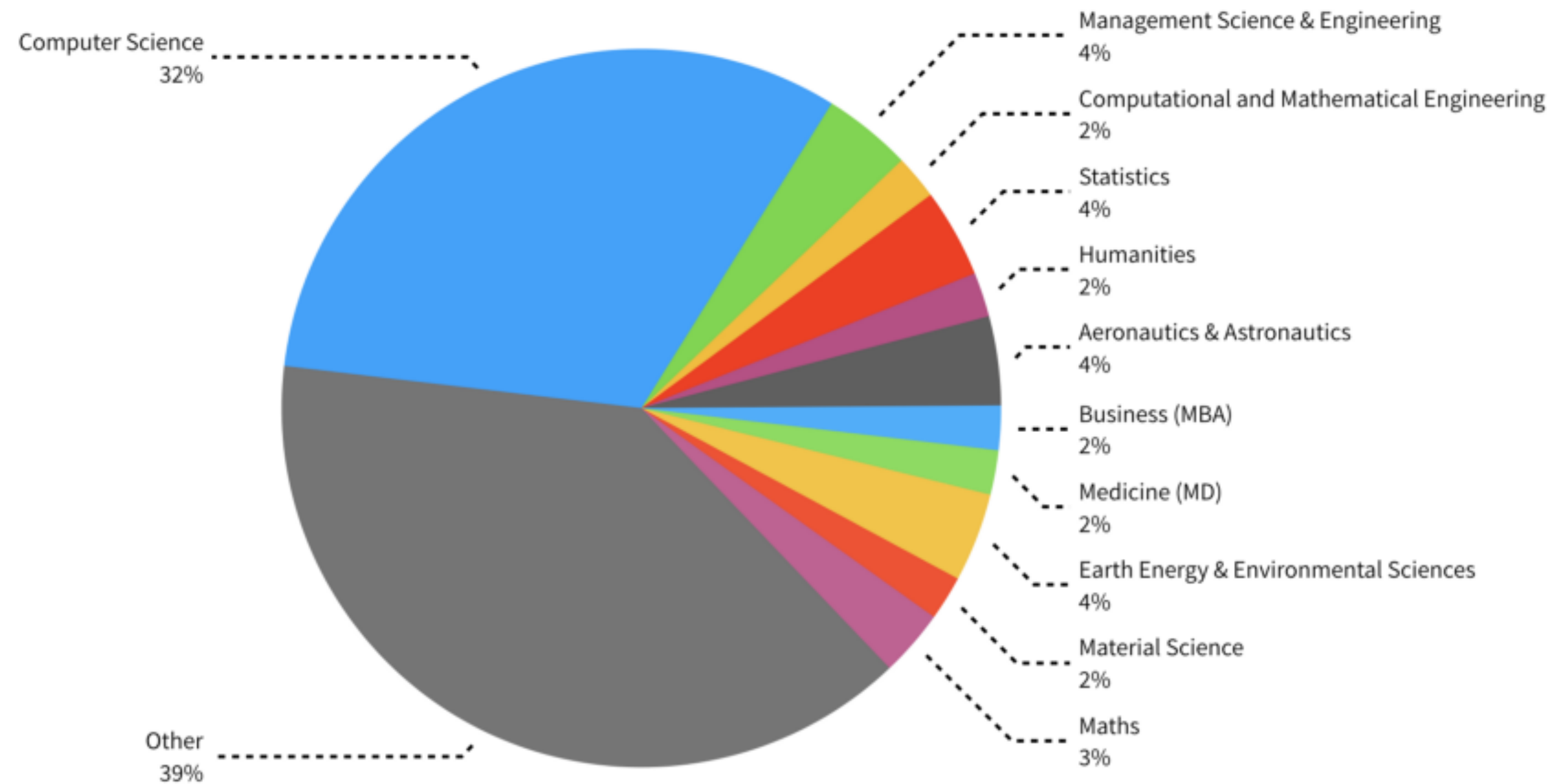
Predicting Ionic Liquid Materials Properties from Chemical Structure

Tyler Quill, Shayta Roy and Yaakov Tuchman
Department of Materials Science & Engineering
Stanford University

CS230

Learning Power Flow Mappings for Power Grid Simulation

Lily Buechler
Department of Mechanical Engineering
Stanford University

CS230

Deep Learning for Local Ancestry Inference

Jan Sokol
Biomedical Informatics Training Program
Stanford University

Matthew Aguirre
Biomedical Informatics Training Program
Stanford University

CS230

CADDYIAN - Diver Gesture Language Classification

Veronica Peng
Dept. of Computer Science

Xi Yu
Dept. of Bioengineering

Wenxi Zhao
Dept. of Civil & Env. Engineering

CS230

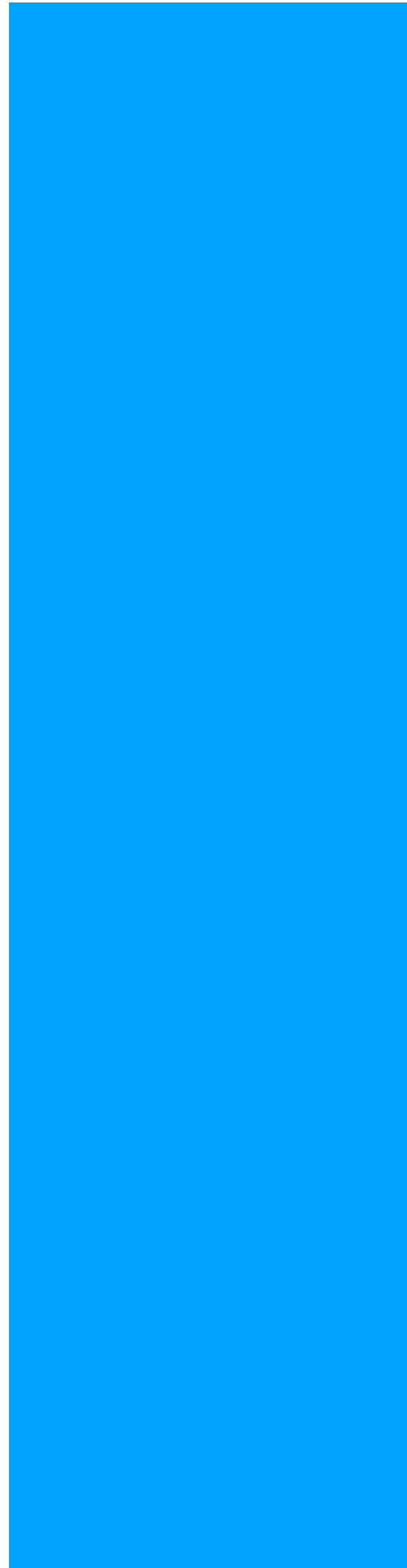## Predicting Parkinson's disease behavioral state from neural and kinematic data

Marissa Lee, Johanna O'Day, Kirsten Seagers
Department of Computer Science
Stanford University

And many more..

Kian Katanforoosh

If you're transitioning to AI, be an AI+X.

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What's next?

Natural Language Processing

CS 124: From Languages to Information (LINGUIST 180, LINGUIST 280)

CS 224N: Natural Language Processing with Deep Learning (LINGUIST 284)

CS 224U: Natural Language Understanding (LINGUIST 188, LINGUIST 288)

CS 276: Information Retrieval and Web Search (LINGUIST 286)

Computer Vision

CS 131: Computer Vision: Foundations and Applications

CS 205L: Continuous Mathematical Methods with an Emphasis on Machine Learning

CS 231N: Convolutional Neural Networks for Visual Recognition

CS 348K: Visual Computing Systems

Others:

CS 273B: Deep Learning in Genomics and Biomedicine (BIODS 237, BIOMEDIN 273B, GENE 236)

CS 236: Deep Generative Models

CS 228: Probabilistic Graphical Models: Principles and Techniques

CS 337: AI-Assisted Care (MED 277)

CS 229: Machine Learning (STATS 229)

CS 129: Applied Machine Learning

CS 234: Reinforcement Learning

CS 221: Artificial Intelligence: Principles and Techniques

CS 217: Hardware Accelerators for Machine Learning

CS 329S: Machine Learning Systems Design

Classes at Stanford

AI for Healthcare Bootcamp

AI for Climate Bootcamp

Kian Katanforoosh, Andrew Ng

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1. *You can **feel proud**. Despite the difficult circumstances, you've built a project that you can carry with you after the class.*

2. *If you enjoyed working on your project, **keep developing it after the class**.*

3. *We encourage you to **review other students' projects** which will be shared on the CS230 website.*

4. ***Keep in touch**. You're officially a CS230 graduate, and we hope that you've built a relationship with your team members or a teaching staff member.*

Kian Katanforoosh, Andrew Ng