Machine Learning (CS 181): 23b. What Next?

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What now?

If you liked practical hacking...

- Do some more Kaggle competitions.
- Learn TensorFlow/Keras/PyTorch. Very fun and brain twisting.

If you liked applications...

- Think about clever ways that you can get data.
- Utilize Harvard's computational resources to build something.

If you liked the math...

- Read more papers. Look at NIPS/ICML/ICLR, all CS papers are free.
- Take some more math/stat classes.

Graduate ML Courses

- CS 228: Computational Learning Theory
- CS 281: Advanced Machine Learning
- CS 282R: Reinforcement Learning/Inference
- CS 283: Computer Vision
- CS 284: Optimization for Robotics
- CS 287: Natural Language Processing
- CS 28x: Deep Learning (expected)

Other Relevant Graduate Courses

- AM 121: Optimization
- AM 221: Advanced Optimization
- Stat 210: Probability
- Stat 211: Inference I
- ES 250: Statistical Inference

Research in ML

- Finale Doshi-Velez: Statistical Inference, Bayesian methods, Interpretability, Medical Applications, Graphical and Topic Models.
- Yaron Singer: Optimization, Combinatorial optimization, Learnability.
- Me: Deep Learning, Natural Language Processing, HMMs, Structured Prediction, Undirected Graphical Models
- Hanspeter Pfister: Vision and Visualization
- David Brooks and Gu-Yeon Wei: Hardware for Deep Learning

Jobs Using ML

ML Companies/Divisions in Boston-area (that I know of):

- **Big Guys:** Apple Siri, Google Brain, Oracle, Twitter Cortex, Amazon Echo, Facebook, Microsoft, NVidia, TripAdvisor, Huawei Research, LionBridge, Spotify Labs, Nuance (speech recognition), Novartis, ...
- **Startups:** Sentanai, Talla, Lexumo, DataRobot, Semantic Machines (NLP), Insurify, Spiro, Evergage, Jibo, Elemantal Machines, ...