Kojin Oshiba

Machine Learning Engineer

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Industry Experience

Machine Learning Engineer Intern May - August 2018
Wish, mobile e-commerce unicorn with $9B valuation San Francisco, CA
Fullstack machine learning engineering from model development, deployment to analysis.
- Developed contextual bandit algorithms to recommend newly arrived items with no purchases, clicks or ratings.
- Improve the session based recommendation model which was estimated to increase annual revenue by $5M.
- Deployed image search tensorflow models in production to communicate with golang backend.
- Conducted10 AB experiments and analyzed their outcome metrics with 300M users on the platform.

Data Scientist March - August 2017
QuantCo, data consulting firm with econometrics PhDs from Harvard and MIT Tokyo, Japan / Boston, MA
Co-founded a Tokyo regional office. Developed coupon targeting models for the world's 5th largest e-commerce.
- Created a causal inference model for targeting with xgboost based on recent econometrics research papers.
- Designed sample sizes, coupon prices and test periods for two large AB tests to validate the model.
- Estimated +$14M in annual revenue and presented the result to the CEO, chief data scientist and the VP's.

Machine Learning Engineer Intern August - September 2016
Retty, "Japanese Yelp" with 40M MAU Tokyo, Japan
- Processed restaurant reviews to detect incorrectly categorized restaurants.
- Presented the successful analysis result in front of 20 engineers, marketers and C-level executives.

Data Engineer Intern May - August 2016
Gradle, default build tool for Android Studio San Francisco, CA
- Built an entire data pipeline from logging to dashboarding on Gradle downloads and usage summary statistics.
- Awarded the weekly MVP twice for enhancing the visibility of Gradle downloads.

Academic Experience

Worked closely with professors in Harvard Economics & Computation Group: David Parkes, Yaron Singer and Yiling Chen.

Published Papers:
- "Deep Label Propagation for Semi-Supervised Learning" with Nir Rosenfeld and Amir Globerson (paper, code)
- "Accountability Through Robust Classification" with Daniel Giebisch, Suproteem Sarkar and Yaron Singer (paper)

Ongoing Projects:
- Harvard - Tata Communications joint research on churn rate prediction via causal structure identification.
- Robust optimization against adversarial attacks.

Teaching Assistant:
- Advanced Optimization: graduate level course on convex, combinatorial and submodular optimization.
- Business Analytics Program: Harvard Business School course on data driven ads, recommendation and pricing.

Education

Harvard College — B.A. candidate in Computer Science and Statistics
Cambridge, MA • Class of 2019 • GPA 3.76

Undergraduate Courses: Algorithms and Data Structures, Functional / OO Programming, Computation Theory
Graduate Courses: Machine Learning, Probability, Optimization, Computational Economics, Causal Inference

Skills

Languages: Python, Go, R, SQL, C++, Ruby, Swift

Machine Learning: TensorFlow, PyTorch, Keras, Scikit Learn, Edward

Data Infrastructure: AWS (EC2, S3, RDS, Redshift), Hive, Spark, GPU **Tools:** Linux, GitHub, Docker, Firebase

Frameworks: Ruby on Rails, Flask, React **OSS Contributions:** Homebrew, FFaker (Rails rspec gem)

Side Projects: Virtual Reality Pet, a Google Cardboard app with 12,000+ downloads. TensorFlow tutorial on robust machine learning. My GitHub has total 200+ stars / 100+ forks.