Johnson Lam

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Education

Boston University — **M.S. Computer Science** — January 2016 - December 2017

- Related Courses: Data Mining, Distributed Systems, Data Analytics, Machine Learning, Statistics
- Course Assistant: CS 131 Combinatoric Structures (Fall 2017)
- Advisor: Prof. Babis Tsourakakis

Boston University — **B.A. Computer Science** — September 2013 - December 2016

- Achievements: Top 10% of in-class Kaggle competitions, Dean's List

Experience

Machine Learning Engineer — **Soroco**, Boston, MA — January 2018 - Present

Develop algorithms for extracting data hierarchies (text, data fields, tables) from document scans

- Responsible for end-to-end project life cycle: research, experimention, evaluation, productionization
- Contribute to custom synthetic data generator for training models using *NumPy*, *OpenCV*, *Pillow*
- Build tools for training, visualization, and image processing with *Scikit-learn*, *Matplotlib*, *PyTorch*
- Present research papers on various deep learning topics on a bi-weekly basis

Project Manager — **ChatrHealth**, Kolkata, India — July - August 2017

Launched a mobile application at Narayana Health Hospital to help improve patient safety during surgery

- Worked with surgical team to incorporate application into existing workflow of the operating room
- Reduced anesthesia adverse events and unplanned return to surgery by 40% and 32.2%, respectively

Software Engineer Intern — **GE Digital**, Foxborough, MA — May - August 2016

Developed tools utilizing GE's Predix platform for analyzing and operating IoT devices

- Utilized *Elasticsearch* to demonstrate its viability as a real time search engine on data streams
- Created application to display job progress across a client manufacturing site to improve floor visibility

Projects

Directed Study *Microsoft Sponsored* — **Master of the Conversation** — June - August 2017

- Investigated different approaches for chatbots to engage in goal-oriented conversations
- Implemented and presented two methods: Facebook's bAbI project and Microsoft's LUIS framework

Distributed Systems — **Raft Consensus Algorithm** — January - May 2017

- Built a fault-tolerant key-value storage from bottom-up using Raft as a consensus protocol in *Golang*
- Learned intricacies of distributed systems, including performance, fault-tolerance, and consistency

Data Mining — **Predicting Amazon Purchases and Rating** — September - December 2016

- Predict an item's star rating using k-means clustering on sentiment analysis scores of user comments
- Built a recommender system using collaborative filtering to predict if a user would purchase an item

Publication

ECML-PKDD 2018 — *Risk-Averse Matchings over Uncertain Graph Databases*. Charalampos E. Tsourakakis, Shreyas Sekar, **Johnson Lam**, Liu Yang.

Technical Skills

Languages — (proficient) Python, (familiar) Golang, Java

Software — NumPy, OpenCV, Pillow, PyTorch, Scikit-image, Scikit-learn, Linux, Git