Edgar Xi

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA

B.S. in Statistics, Machine Learning Dean's List (4.0 GPA, Fall 2017) Expected May 2019

EXPERIENCE

Squarespace, New York, NY

Summer 2018

Software Engineering Intern - Machine Learning

- Implemented, optimized, and deployed state of the art saliency mapping network with Tensorflow
- Extended internal streaming ETL library for rapid model prototyping and retraining
- Configured and deployed microservices for ML models on Kubernetes clusters along with extensive logging and load-testing in Prometheus and Locust

Percepsense, Pittsburgh, PA

2016-2018

Machine Learning Engineer

- Automated road quality assessment using crowdsourced vehicular telematics data
- Conducted extensive feature engineering & hyperparameter tuning across time-series models
- Negotiated contracts with city of Detroit and large Japanese automotive manufacturer

Curb.ai, Pittsburgh, PA

Summer 2017

Data Scientist

- o Automated classification of home image data with convolutional neural networks
- o 20x speedup over human subject classification with comparable F-1 score

Carnegie Mellon University, Pittsburgh, PA

October 2016 - Present

Research Assistant

- Interpretable and Robust Machine Learning (Prof Zico Kolter)
- Imaging and Genetics Modeling using Deep Graphical Models with a focus on model interpretability
 - o Guided Backpropogation, Class-Activation Mapping, DeepDream, Saliency Maps
- Radiologist-Level Pneumonia Detection on Chest X-Rays with Deep Learning
 - o DenseNet-121/169/201, ResNet-18/34/101, SqueezeNet

PUBLICATIONS

- Xi, E., Bing, S., Jin, Y. "Capsule Network Performance on Complex Data" accepted to IEEE arXiv:1712.03480 10 Dec 2017
- Bhatt, U., Xi, E., Mani, S., Kolter, J. "Intelligent Pothole Detection" in DSSG@UChicago, 10 Oct 2017 arXiv:1710.02595
- o Lee, M., Xi, E., Jin, Y., "Optimal Control in StarCraft II with Asynchronous RL" (Preprint) 8 May 2018
- Xi, E., Bhatt, U. "Mining Urban Systems for Data Analysis" (<u>Preprint</u>) submitted to NIPS workshop on mobile computing 14 Sep 2018

TEACHING

TA: Graduate Introduction to Machine Learning (10-601)

Fall 2018

 Bayesian networks, decision tree learning, support vector machines, statistical learning methods, unsupervised learning and reinforcement learning

TA: Practical Data Science (15-388)

Spring 2018

o Data processing & analysis, machine learning (regression, classification, unsupervised learning)

COURSEWORK

- o 10-707 Deep Learning (PHD)
- 10-701 Machine Learning (PHD)
- 15-122 Imperative Programming
- o 15-388 Data Science (TA)

- o 10-703 Deep Reinforcement Learning (PHD)
- o 36-402 Advanced Data Analysis
- o 36-401 Modern Regression
- o 15-386 Neural Computation

SKILLS

 Python, C/C++,R, Julia, Java, Matlab | Keras, Tensorflow, Pandas, Scikit-Learn | Unix, Django, MySQL, AWS, Docker, Kubernetes |