Josh Kelle

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Work Experience

Pinterest, Ads Ranking, Machine Learning Engineer (*San Francisco, CA*) 2017 - present
Owner of the Search Ads engagement and relevance models
Grew the models from logistic regression to GBDTs to DNNs
End-to-end modeling: data collection, feature engineering, model training, analysis, deployment, serving, monitoring
Implemented parts of the ML pipeline and many of the modelling insights tools
Worked with large scale engagement datasets and small scale human-labeled datasets

Pinterest, Search Quality, Intern (*San Francisco, CA*) Summer 2016
Improved search relevancy for male users; introduced new features and trained male-specific model

Apple, Applied Machine Learning, Intern (*Cupertino, CA*) Summer 2015
Designed and prototyped a product recommendations model for the Apple Online Store

Apple, iCloud Application Engineering, Intern (*Cupertino, CA*) Summer 2014
Designed and prototyped a cluster management system that auto-scales in response to resource demand

Applied Research Laboratories, Space & Geophysics Lab, Honors Student Researcher (*Austin, TX*) 2013 – 2015
Implemented and evaluated new spatial smoothing algorithms for modeling the ionosphere

Education

The University of Texas, Austin
Masters, Computer Science with a focus in Machine Learning 2017
    Autonomous Robots (*Dr. Peter Stone*)
    Visual Recognition (*Dr. Kristen Grauman*)

The University of Texas, Austin
Bachelors, Computer Science 2016

Coursera
Deep Learning Specialization (*Dr. Andrew Ng*) 2018 - 2019
    Structuring Machine Learning Projects
    Convolutional Neural Networks
    Sequence Models

Research & Projects

RoboCup (Robot Soccer) (*Advised by Dr. Peter Stone*) 2016 - 2017
Designed and implemented soccer ball detection algorithm to run in real time on low-powered SoftBank Nao robots
Used a combination of classical computer vision techniques, geometry, heuristics, and machine learning
Sensor fusion and tracking: multiple robots contribute to a shared belief of ball location via Kalman filter
Published to, and gave a talk at, the RoboCup Symposium (*Nagoya, Japan*)
Team competition placements: 1st in international exibition tournament (*Beijing, China*)
                                   1st in national US Open tournaments (*Brunswick, Maine & Miami, Florida*)
                                   2nd in international RoboCup tournament (*Leipzig, Germany*)

Deep Q-Learning (DQN), personal side project 2017
Implemented DQN reinforcement learning algorithm which learns to play Atari games from pixels using TensorFlow and OpenAI Gym

Master's Thesis: Intelligent Feature Extraction for Video Activity Classification (*Advised by Dr. Kristen Grauman*) 2014 - 2017
Developed a random forest model to predict which visual features of a video would offer the best cost to benefit tradeoff to
extract next in a sequence, balancing feature extraction cost with incremental accuracy increase expected from that feature

Technical Skills

Python, Java, C++, TensorFlow, XGBoost, OpenCV, Spark, Hadoop, Hive, Pandas, NumPy, Scikit-learn, Matplotlib