Wojtek Swiderski

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Skills

Languages Python, C/C++, Java, JavaScript, Scala
Technologies Spark, Tornado, Flask, Redshift, HBase, PostgreSQL, MongoDB, Kafka, Thrift, scikit-learn, Tensorflow, OpenCV
Tools Vim, Bash, Fish, Git, IntelliJ, Sublime Text

Experience

Quora   *Mountain View, California*
Software Engineering Intern   *August 2016 - Present*
- Training and experimenting with multiple machine learning models for related questions ranking; so far, **increased signups by ∼2%**
- Built pipeline for training above models (logistic regression, gradient boosted decision trees, random forests) and evaluating them using AUROC and NDCG; decreased training time from 3 hours to 5 minutes by parallelizing feature extraction
- Refactored caching layer for related questions resulting in ∼**90% less lines of code** and removal of a deprecated caching abstraction
- Used Spark to train a collaborative filtering model (ALS matrix factorization) on a matrix with hundreds of millions of items

Uber   *San Francisco, California*
Software Engineering Intern - Uber for Business   *January - April 2016*
- Individually built three platform services responsible for centralized billing and cross data center transactions using Python/Tornado
- Architected payment transactions services to scale to **millions of users globally** and to replicate data across multiple data centers
- Migrated payment account metadata from PostgreSQL to Schemaless (Uber's scalable datastore); sharded data and built indexes to **allow for constant time queries**
- Employed MVCS design paradigm and polymorphism to support quick implementation of additional payment methods
- Used Thrift to create language agnostic service interfaces and to maintain a scalable codebase in Uber's service-oriented architecture

Sony Creative Software   *Waterloo, Ontario*
Software Engineering Intern   *May - August 2015*
- Worked on Sony Catalyst series of three cross-platform applications for professional video preparation and editing
- Developed APIs for UI components such as context menus used by all three applications; built with C++ and the Qt Framework
- Designed and implemented a cross-platform framework for handling mouse and key system events
- Implemented a core feature which **detects and corrects flash bands in media**
- Worked with and debugged a large, multi-threaded codebase shared between multiple applications

Personal Projects

Human Pose Estimation Cal Hacks 3.0
- Used Caffe to implement a human pose estimator using a pre-trained convolutional neural network from a *paper by Shih-En Wei*
- Currently working on training a convolutional neural network regressor from *deeppose by Google Research* using Tensorflow

Machine Learning Library
- Implemented a neural network, support vector machine and other algorithms from Andrew Ng's machine learning course in C++

Sunami Music Player Google Play Store
- Implemented smart suggestion system for music using a graph of genres generated with the Echo Nest API
- Architected the Android application using asynchronous methods and image caching resulting in a smooth and responsive UX

GlassBoard Hack the North 2015
- Built augmented reality Google cardboard application that allows users to interact with visual overlays using their hands
- Implemented face and point detection using OpenCV as well as messaging using the Twilio API

Education

University of Waterloo   *Waterloo, Ontario*
Candidate for Bachelor of Software Engineering   *2014 - 2019*
- Engineering and Mathematics Dean's Honours List (GPA 4.0/4.0)