Christopher Boggs

Software Engineer
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Education

University of Michigan – Ann Arbor — Ann Arbor, MI

- M.S.E. in Computer Science Engineering with focus in Distributed Systems and Machine Learning, Dec 2018. GPA: 3.7
- B.S.E. in Computer Science Engineering, Dec 2017
- Active member of Eta Kappa Nu (HKN), an Electrical Engineering and Computer Science Honor Society
- Significant Coursework: Distributed Systems, Artificial Intelligence, Machine Learning, Reinforcement Learning, Computer Security, Web Systems, Graduate System Design, Mathematics of Finance, Graduate Algorithms

Experience

Bloomberg L.P. — New York City, NY
Software Engineering Intern – Financial Analytics and Verticals – Derivatives Data — *June 2018 – August 2018*

- Engineered distributed pipeline using Spark to train machine learning models for fitting option volatility surfaces.
- Implemented distributed EstimatorGridSearchCV to perform search for optimal machine learning model/parameter combination across a Spark cluster. Has support for evaluating both scikit-learn models and neural networks simultaneously.
- Developed well performing models which are able to quickly fit new surfaces with low error (0.15 MSE over 100+ points) in milliseconds

University of Michigan – Ann Arbor — Ann Arbor, MI
Graduate Student Instructor – EECS 485 – Web Systems — *January 2018 – Current*

- Led two discussion-based classes a week for roughly 80 students
- Collaborated with staff in creating/revising student projects and creating examinations for 400 students

Bloomberg L.P. — New York City, NY
Software Engineering Intern – Financial Analytics and Verticals – Mortgages — *May 2017 – August 2017*

- Developed and designed application to analyze and deconstruct mortgage pool cohorts based on defined filters. Flask micro service with Angular Frontend
- Optimized refinancing incentive curve calculation to 30 seconds per request compared to competitor's 90 seconds
- Refocused and remodeled premium mortgage product based on team and client desires

The Boeing Company — Seattle, WA
Software Engineering Intern — *June 2016 – August 2016*

- Created and devised Android application with Optical Character Recognition currently being used by all company college recruiters as of Fall 2016
- Built Puppet modules to enforce government regulations on UNIX machines, eliminating need for scripts
- Wrote Angular application to automate inventory tracking and showcase use of Docker within the company

Covenant Eyes — Owosso, MI
Software Development Intern – Windows Client — *June 2015 – August 2015*

- Improved and expanded existing Windows client in C++ to increase customer satisfaction
- Developed front-end messaging system using SQLite database to notify users of potential upgrades, billing problems, etc. Increased on-time payments by 20%
- Engineered solutions to expansions such as intercepting traffic, filtering, database management, and image comprehension

Technical Skills

Languages

- Proficiencies: C++; Java; Python; SQL; JavaScript
- Experience with: Haskell; Swift; Matlab; HTML/CSS

Technologies

- Linux; Git; Flask; Puppet; iOS; Android, Tensorflow, scikit-learn, Spark, Hadoop

Projects

- Blockchain Voting System (2018). A research project proposing a blockchain approach to secure voting systems (using MultiChain), allowing immutable voting records and parallelized counting.
- Tetris (2016). Recreated classic game, complete with animations, high-scores, and levels. Swift (iOS)
- Chess (2015). Developed fully-functional chess game with piece objects and inherited properties. C++
- Investment Advisor (2014). Calculated moving averages with data from Yahoo Finance API then back-tested with previous trends to advise action and holding periods for stocks. Objective-C (OSX)