Joshua D. Preuss

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Experience

DataRobot Boston, MA

Backend Engineer & Project Lead *July 2019 - Present*

Member of a machine learning engineering team which owned the core machine learning estimators and algorithms of the product, as well as the machine learning automation algorithm.

- Vetted, introduced and hand-tuned new machine learning algorithms
- Extended the hyperparameter search algorithms capabilities
- Led team of 5 building product to let users submit algorithms to leverage DataRobot's modeling and introspection algorithms.
- Worked with customer facing data scientists to ensure product fit.
- Owned release process vetting that internal DataRobot models didn't regress in terms of key performance metrics.

Amazon Alexa Cambridge, MA

Software Development Engineer *September 2017 to May 2019*

Member of data enginering team for NLP scientific tooling as their numbers grew an order of magnitude. The team was responsible for migrating tools and ML/AI model building and testing workflows from scientist scripts into services, stabilizing and securing the models and services, while making tooling changes as Alexa supported new features. Worked in Python and Java, heavily with Spark, and utilized many major Amazon products

- Led tooling migration to execute on a new, more secure experimentation platform, which involved collaboratng across teams with scientists, InfoSec, and the platform's engineers as an initial customer.
- Secured development on our model training and release orchestrator, brought attention across the organization to a systemic process flaw
- Architected and built organization's first customer-facing service, allowing domain-specific teams and third-party scientists to craft NLU ground truth simultaneously.

Amazon Seattle WA

Software Engineering Intern *June 2016 to August 2016*

Designed, wrote, tested, and deployed worldwide a service for the EC2 group to automate host recovery. The service was written using Ruby and MySQL, and follows AWS best practice coding and testing standards and saves Amazon tens of millions of dollars per year in recovered compute capacity.

University of Maryland College Park, MD

Undergraduate Teaching Assistant *September 2015 to December 2015*

Taught a discussion class for CMSC330 – Programming Languages under Michael Hicks and held office hours weekly. The curriculum included Ruby, OCaml and Prolog and taught parsing, automata, garbage collection and language security. Worked with the professor to develop new project material in Ruby to teach students network securitization.

Autonomous Marine Systems Washington DC

Intern *June 2014 to August 2014*

Investigated many middleware packages and computer vision software packages and recommended best fit for marine robot navigation. Ported existing stack from an Android based system to an ARM based embedded system running MOOS-IvP in C and C++ and set up framework for further development.

Education

University of Maryland, College Park *September 2013 to May 2017*

B.Eng. Computer Engineering - GPA 3.61

- University Honors, Banneker Key Scholar, National Merit Scholar
- Active member of the hiking club, drove city busses for a year, DJ'ed a radio show for three years, and was a member of the CHUM housing cooperative.

Outside of Work

- Organizer with the Somerville Democrats
- Side project in Rust implementing Sed

- Open Source work on Project DrawDown codebase
- On three person team which took third place at the Signal Processing Cup 2017