Josh Preuss

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EXPERIENCE

DataRobot – **Senior Software Engineer & Team Lead** Boston, MA │ Jul 2019 – Present

- Lead on a new machine learning infrastructure product, supervising a team that grew from 0 to 10+ people. This product allows customers to create pipelines combining tasks with their own ML algorithms with DataRobot native modeling algorithms. Brought product from proof of concept to general availability.
- Developed, operated and secured job scheduling infrastructure that ran above product on EKS.
- Ran Kubernetes tech talk group at DataRobot
- Vetted, introduced and hand-tuned Gaussian Process Classifiers for the main product, which involved diving into the algorithms to understand how and when they excel.
- Owned quarterly model performance regression QA process for the whole product, written in R. Decentralized and polished the process and trained each team's QA engineer to own it.

Amazon Alexa AI – **Software Development Engineer** Cambridge, MA │ Sep 2017 – May 2019

- Led migration to execute science tools on a new, more secure experimentation platform. Collaborated across teams with scientists, InfoSec, and the platform's engineers as an initial customer.
- Secured the NLU model training and testing infrastructure, and brought attention across Alexa to a systemic security flaw.
- Designed and built in Java, python and Spark the organization's first customer-facing service, allowing domain-specific teams and third-party scientists to securely craft NLU ground truth in parallel.

Amazon EC2 – **Software Engineering Intern** Seattle, WA │ Jun 2016 – Aug 2016

- Designed, wrote, tested, and deployed a service worldwide to automate EC2 host recovery.
- The service was written using Ruby and SQL, and saves Amazon tens of millions of dollars per year in recovered compute capacity.

University of Maryland – **Undergraduate Teaching Assistant** College Park, MD │ Sep 2015 – Dec 2015

- Taught a discussion class for a CMSC330 - PL Theory under Prof. Michael Hicks, taught in Ruby, OCaml and Prolog.
- Developed a new student project where students found vulnerabilities in a ruby FTP server, and patched them.

CyberPoint International – **Research Engineering Intern** Baltimore, MD │ Jun 2015 – Aug 2015

- Researched the set up of a penetration testing framework for Low-Power Wireless Personal Area Networks, on top of Riot OS, using a swarm of IOT devices.

Autonomous Marine Systems – **Intern** Washington DC │ Jun 2014 – Aug 2014

- Investigated 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++.

EDUCATION

University of Maryland, College Park - B.Eng. Computer Engineering

- University Honors, Banneker Key Scholar, National Merit Scholar
- Member of the hiking club, cybersecurity club, bus driver, radio DJ for 3 years, regular hackathon attendee.

SKILLS

- **Data Science/ML**: SQL, Gaussian Processes, Scikit-learn, data visualization, R
- **Languages**: Python, Java, C, Ruby, Assembly, Javascript, Rust
- **Hard**: Kubernetes, Docker, Linux, Kibana, Argo, DynamoDB, SWF, MongoDB, Spark, CloudFormation
- **Soft**: Agile, Kanban, stakeholder management, CLI Design, Management, Refactoring, Oncall Process

PROJECTS

TipTip Co-Founder Jun 2020 - Present
Created plugin, backend and website to enable one-click microdonations for blogs and news websites. Check it out at gettiptip.com

Somerville Democrats Organizer Jan 2020 - Nov 2020
Set up software, developed website, cleaned data, and supported phonebanks

Ded Learning Rust Jun 2018 - Dec 2018
Partial implementation of the Sed cli tool

Signal Processing Cup 2017 3rd of 40 teams Dec 2017 - Mar 2017
Competed with a three person team, implemented music beat tracking algorithm, chosen for finals at ICASSP