Josh Preuss

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EXPERIENCE

David Energy – **Software Engineer**   New York, NY | Feb 2022 – Present
- Productionized webapp and scheduled jobs code and operations, and introduced DataDog and PagerDuty
- Created thermostat Demand Response capability by introducing CDK and CodePipelines, now dispatching to over 150 businesses
- Created capability to discharge batteries and curtail EV charging due to price signals, generating over $400/mo payouts for certain residential customers at the peak of ERCOT prices
- Designed and created infrastructure using SQS and Lambda for delegating asynchronous work
- Automated payment processing and bill credit calculations based on customer performance, removing 3-4 hours of daily ops burden
- Owned infrastructure reliability and uptime

DataRobot – **Senior Software Engineer & Team Lead**   Boston, MA | Jul 2019 – Jan 2022
- 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.

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.
- Additional summer internships in robotics at Autonomous Marine Systems, and IOT Cybersecurity at CyberPoint

SKILLS

- **Data Science/ML**: SQL, Gaussian Processes, Scikit-learn, 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 - Feb 2021
Created plugin, backend and website to enable one-click microdonations for blogs and news websites.

Signal Processing Cup   Dec 2017 - Mar 2017
For Computer Engineering Capstone project, I competed with a three person team to implement a music beat tracking algorithm. Won 3rd place of 40 teams at ICASSP 2017