

Jason Liang

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WORK EXPERIENCE

Scale (September 2019 – present)

Product Manager, Senior Software Engineer

- Architected and guided the development of a general framework for programmatic error checking of annotations, which is used across all product lines at Scale and enables consistent achievement of >95% precision and recall quality SLAs (service level agreements) for Scale's customers.
- Led both engineering and operations for a multi-million dollar project for a critical customer, which required growing the total number of annotation hours on Scale's platform by 30% in less than a month.
- As the first product engineer working on Scale's Government business, built features that reduced annotation time by 50% and enabled the team to meet critical milestones for Scale's initial \$100M contract.
- Designed and coded a general frontend framework for image and video tasks that enabled Scale to support projects worth tens of millions of dollars in ARR (annual recurring revenue).
- Built Scale's long video product, which allows customers to annotate and extract information from videos which are hours long, at 4K resolution, and at high (>30) FPS.

Amazon Lab126, Alexa Engine organization (August 2017 – September 2019)

Software Development Engineer II/L5

- Using profiling and load testing, drove performance optimization work for core Alexa service that increased service capacity (transactions per second/TPS) by 3X, saving \$2 million+ a year on hardware costs.
- Implemented audio streaming optimizations in Java, reducing latency by 40ms at p50/250ms at p99.
- While on call for core Alexa service which had 99.95% availability in 2018, root caused and resolved issues ranging from corrupted databases to device reconnection storms to race conditions on distributed sessions.
- Led project that decoupled directive (message from Alexa to device) sending functionality into a microservice, centralizing directive routing logic, enabling continuous feature deployment, and increasing service availability.
- As the co-tech lead for the Alexa smart home semantics project, designed and implemented a framework for device manufacturers to define custom utterances with which customers can control smart home devices.

SKILLS

- Languages: Javascript (Typescript, NodeJS, React), Java (JAX-RS/REST APIs, Spring), Python (Tensorflow, Numpy, Scikit-Learn, Pandas, Django)
- Technologies/software: Git, MongoDB, AWS stack (EC2, DynamoDB), VSCode, IntelliJ

PROJECTS

UN SDG AI Lab (April 2020 – October 2020)

- Used topic modeling to analyze large corpuses of policy documents and determine which SDGs they addressed.

EDUCATION

Massachusetts Institute of Technology (MIT) (August 2013 – June 2017)

B.S. in computer science, B.S. in mathematics, minor in economics (major GPA: 4.9/5.0)

- Relevant coursework: Machine Learning, Computer Vision, Natural Language Processing, Computer Systems Security, Performance Engineering of Software Systems, Computer System Engineering, Communicating with Mobile Technology, Elements of Software Construction, Design and Analysis of Algorithms, E-Commerce.

Amazon Machine Learning University (April 2018 – September 2019)

- Attended internal Amazon classes and worked on homework and projects that apply ML techniques to problems such as Amazon affiliate revenue prediction and machine translation using encoder-decoder networks.
- Coursework: Regression, Data Science, Decision Trees, Feedforward Neural Networks, Recurrent Neural Networks.