Billy Liu

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EXPERIENCE

Amazon
Seattle, WA

Software Development Engineer II May 2022 - Present

- Lead design and development of a standardized **TypeScript** component package vended to all engineers within Amazon Fashion, allowing each partner team to save **16 weeks** of effort
- Lead development of a new customer experience to present ML-generated outfit styling ideas across Amazon.com, serving **11,000 TPS** and increasing annualized units sold by **1.7 million**
- Designed and implemented **Spark** pipelines to distribute personalized outfits to customers daily for feedback collection; aggregated results to train machine-learning models
- Designed and launched worldwide experiments using A/B testing methods with sample sizes of **50 million** customers; analyzed and presented results to senior leadership
- Mentored engineers and QA by leading design discussions, code reviews, and creating work-back schedules to assign and ensure timely delivery of tasks
- Implemented team processes for operational excellence, including traffic estimation and scaling, roll-back procedures, operational risks, and on-call run-books
- Lead technical proposals and design reviews with product, UX designers, data scientists, QA
- Created metrics, dashboards, alarms, and ticketing to support and monitor deployed services; investigated and resolved critical issues during on-call shifts

Nordstrom
Seattle, WA

Software Engineer II Dec 2020 - Apr 2022

- Built and deployed streaming infrastructure to process tens of thousands of daily customer transactions using **Java** with **Kafka**, reducing marketing profile generation time by 35%
- Designed and implemented React app for detecting company-wide data redundancies using **TypeScript** with **React**, **Redux**, and **D3.js**, decreasing **AWS S3** and **DynamoDB** costs by 18%
- Lead design review to update all Nordstrom customer marketing profiles, including engineering, security, devOps, and monitoring
- Lead demos, gathered feedback from stakeholders, lead creation and prioritization of sprint tasks, and mentor interns and new team members

Software Engineer I Sept 2018 - Nov 2020

- Developed full-stack web application for monitoring organization-wide data quality using **JavaScript** with **Angular**, decreasing incident response time by 39%
- Implemented RESTful APIs using **Python** with **Django**, querying from **MySQL** databases and **Apache Hive** data warehouses
- Lead migration process to update logging, alerting, metrics collection systems using **Splunk**, **DataDog**, and **New Relic**
- Deployed and monitored systems using **Kubernetes**, **Docker**, **Gitlab CI/CD**, and **AWS EC2**

SKILLS

Languages	JavaScript/TypeScript, Python, SQL, Java, C#, HTML, CSS
Tools & Libraries	Spark, Pandas, Kafka, Airflow, Glue ETL, React, Express/Node.js, Django
DevOps	AWS, CI/CD, Docker, Kubernetes, New Relic, Splunk, Kibana, SSL/TLS

EDUCATION

University of British Columbia
Vancouver, BC

BSc. Computer Science & Statistics (Co-op Program) May 2018