

# Billy Liu

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## EXPERIENCE

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### Amazon

Seattle, WA

Software Development Engineer II

May 2022 - Present

- Lead development of a new customer experience to present various outfit styling ideas across Amazon.com, increasing annualized units sold by 1.7 million; collaborated with UX/UI designers, data scientists, and QA Engineers as the lead software engineer
- Designed and implemented **Spark** pipelines to select and distribute outfits daily to customers for feedback collection; results were aggregated to train and improve machine-learning models
- Designed, launched, and analyzed multiple worldwide experiments using A/B testing methods utilizing sample sizes of 50 million customers
- Created metrics, dashboards, alarms, and ticketing to support and monitor deployed systems; 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

- Full-stack development of 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**

Software Engineer Intern

Jun 2018 - Aug 2018

- Responsible for sunset of stand-alone Java application to integrated **JavaScript** system using **Elasticsearch**
- Implemented integration tests into **Jenkins CI/CD** pipeline using **Python** with **Selenium**, increasing test coverage by 24%
- Prototyped self-checkout service using RFID hardware, **JavaScript** with **React**, **MongoDB**, and mobile payment technologies; deployed using **Docker** on **AWS ECS**

## SKILLS

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<b>Programming Languages</b>	Java, JavaScript/TypeScript, Python, C/C++, C#, R, SQL, HTML, CSS
<b>Frameworks &amp; Libraries</b>	React, Redux, Angular, D3.js, Express/Node.js, Django, Spring
<b>DevOps</b>	AWS, Gitlab CI/CD, Docker, Kubernetes, New Relic, Splunk, SSL/TLS

## EDUCATION

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### University of British Columbia

Vancouver, BC

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

May 2018