Simon Zhang

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Education

University of Southern California — Los Angeles, CA
Bachelor of Science in Computer Science GPA: 3.84 — *August 2019 – May 2023*

Experience

Software Development Engineer Intern — May 2022 – August 2022
Amazon — *Seattle, WA*

- Improved conversion rate by 179 bps and click rate by 130 bps by designing and implementing an optimized layout for Kindle Vella storefront page in React for over 170k monthly users
- Designed and created backend system for weekly scheduled release calendar for Kindle Vella customers to view upcoming episodes
- Used AWS CDK to create and deploy Lambda in Java to detect when author releases a new episode from SQS and store them in DynamoDB by launch date - handles thousands of episodes per day
- Used Java and Spring to create API to access stories releasing on given launch date from Dynamo in 1.2s

Undergraduate Teaching Assistant for Computer Science Department — August 2021 – Present
University of Southern California — *Los Angeles, CA*

- Hold office hours to help students with C++ assignments in Data Structures and Object Oriented Design
- Lead weekly lab sections of over 30 students to recap key concepts from lecture

Data Engineer Intern — June 2021 – August 2021
Sailpoint Technologies — *Austin, TX*

- Worked with data engineering team to research and assist in integrating Snowflake to Sailpoint's data infrastructure as part of transition from ETL to ELT
- Established CI/CD pipeline by creating and deploying a Docker container on Jenkins to pull SQL files from AWS S3 and automate execution of DDL commands on Snowflake
- Migrated existing data transform functions to Snowflake UDFs in Java, decreasing runtimes by an average of 50%

Undergraduate Research Assistant — March 2021 – September 2021
InfoLAB at USC — *Los Angeles, CA*

- Created data preprocessing pipeline for ML research project to assign user GPS pings to points of interests
- Implemented StayPoint Detection Algorithm in Python - finds 50k points of interest from 2.4M GPS pings in 30s
- Created full stack Django web-app with SQL database to visualize GPS points and POI polygons using Google Maps API for labeling and collecting training data

Software Engineer Intern — August 2018 – August 2019
Sterling Medical Devices — *Rochelle Park, NJ*

- Created a web app based plugin for an ALM software (Polarion) using HTML/CSS, JavaScript, Java, and JSP
- Implemented verification checker and export to PDF features, streamlining and reducing time spent on document verification process by 15%
- Resolved functionality and interface issues in external Apache Velocity scripts

Projects

Modernize Build System of Apache Nutch | *Gradle, Kotlin, Java* — January 2023 – Present

- Work with NASA JPL stakeholder to migrate the build system of a popular open source repo as part of senior year capstone

Event Coordinator and Tech Chair of USC Math Club | *React, Gatsby* — February 2021 – Present

- Developed and maintain club website showcasing club members and events
- Organize math-based events such as Integral Bees, BBQs, game nights, grad student panels, and career panels

Technical Skills

Languages: Python, C++, TypeScript & JavaScript, Java, SQL, C, HTML/CSS, LaTeX
Technologies: AWS, React, NumPy, pandas, Django, Docker, Angular, Jenkins, Bootstrap, JSP, JQuery, git