Mingyu Cui

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Education

University of Southern California, Los Angeles, CA   Jan. 2018 – Dec. 2021
Master of Science: Computer Science   GPA: 4.00 / 4
Bachelor of Science: Computer Engineering (Minor: Music Production)   GPA: 3.98 / 4

Work Experience

Robinhood, Software Engineer   Jan. 2022 – Present
- Collaborate with PMs and designers to launch new features (e.g. Cash Sweep, Margin, ACATS) in React and Next.js applications
- Spearhead web GDPR compliance effort across 12 web teams by orchestrating web storage usage audit and developing npm library that integrates with Usercentrics for managing web storage
- Pioneer design and implementation of internal tooling to improve monthly frontend ops time from 2-3 engineering days to 30 minutes
- Implement REST and GraphQL APIs with tests in backend services
- Take initiative to continuously modernize ~50 files containing legacy libraries

TuSimple, Software Engineer Intern   Aug. 2021 – Dec. 2021
- Designed and developed database abstraction layer in PostgreSQL for containerized workflow engine
- Developed REST APIs to provide CRUD operations that manage workflows
- Designed and automated comprehensive test cases with JUnit
- Automated OpenAPI documentation generation with Swagger

Amazon Web Services, Software Development Engineer Intern   May 2021 – Aug. 2021
- Enhanced performance and robustness of service monitoring by migrating to CloudWatch
- Visualized monitoring data by creating regional and cross-region dashboards
- Practiced infrastructure as code by developing deployment pipelines with AWS CDK
- Automated alarms for service degradation and unavailability

Projects

Visual Studio Code Extension - Double Line Numbers   GitHub: https://t.ly/ph6cY
- Developed open-source VSCode Extension to display both absolute and relative line numbers
- Installed by over 3000 users

NASA JPL Capstone Project: Elasticsearch Storage Engine for Sparkler   GitHub: https://t.ly/nOu5y
- Extended Sparkler (web crawler) functionality to accept Elasticsearch as database besides Solr
- Refactored existing open-source Scala codebase (300+ stars) to utilize factory method pattern
- Implemented methods for Resilient Distributed Datasets (RDD) to allow parallelized web crawls

Activities

International Collegiate Programming Contest
- Selected to represent the University of Southern California in team of 3
- 2021 ICPC North America Division Championships: solved 5 problems; ranked 19/42 in West Division
- 2020 ICPC Southern California Regional Contest: solved 6 problems; ranked 20/70 overall
- 2019 ICPC Southern California Regional Contest: solved 5 problems; ranked 14/88 overall
- 2018 ICPC Southern California Regional Contest: solved 5 problems; ranked 18/98 overall

Skills

- Languages: C++, Python, JavaScript/TypeScript, Java, PostgreSQL, MongoDB, GraphQL, Protobuf
- Frameworks: Catch2, Flask, Sanic, Django, NumPy, Pytest, React (Next.js, Remix, TanStack), Vue.js, Bootstrap, MUI, Emotion, Playwright, Node.js (Express.js, Koa), Quarkus, JUnit, Prisma, Mongoose
- Platforms & Tools: AWS (CDK, CloudWatch, EC2, Lambda, S3), GCP, Docker, Kubernetes, Bazel, Vite