

Mohammad Ganji

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PUBLICATION

- Code Coverage Criteria for Asynchronous Programs, Mohammad Ganji, Saba Alimadadi, Frank Tip, In Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'23), pp. 1307-1319. [ACM Library](#), [.pdf](#)

EXPERIENCE

- **Aupera Technologies Inc. ([Link](#))** Burnaby, CA
Software Engineer Mar 2023 - Present
 - Architected an MLOps solution to enable and streamline continous data collection, model retraining and redeployment.
 - Designed and implemented a self-hosted CI/CD pipeline, automating release process of video stream AI framework.
 - Developed and maintained the backend of VMSS framework including IdP, MongoDB, RTSP video streams, 3rd party integrations, storage services, data backup, event based notification systems, and API development.
 - Worked asynchronously in a remote environment with teams distributed in different timezones.
- **Simon Fraser University (SFU)** Burnaby, CA
Research and Teaching Assistant Sep 2020 - Jan 2023 (2.5 years)
 - Published a research paper (Code Coverage Criteria for Asynchronous Programs, dl.acm.org/doi/10.1145/3611643.3616292) as first author.
 - Developed a VSCode extension to integrate our approach into a coding environment.
- **CSIL Exam Scheduler - SFU** Burnaby, CA
Web Developer - Contract Job Jun 2021 - Sep 2021 (4 months)
 - Implemented web server and web client of SFU CSIL in-lab test scheduling automation using Node.js, PostgreSQL, and EJS.
- **Yektanet - Digital Advertising Platform ([Link](#))** Tehran, IR
Software Engineer Dec 2019 - Aug 2020 (8 mo)
 - Scaled, redesigned, and refactored push notification advertising microservice from 5M to 100M daily push notifications, resulting in 15x revenue increase in 1 year.
 - Architected large scale databases (40M+ users, 20+ tables in PostgreSQL) and Redis pipelines to optimize and reduce average query time by 80% for critical, recurring database queries.
 - Stepped up for product management, launch, and release a new feature, aka CPC push advertisement, which led to a 30% revenue growth within a month from first release.
 - Representative for external communication to collaborate with other tech teams and non-technical teams, such as sales, account management and product teams.
 - Set up log management pipelines using ELK stack (Elasticsearch, Logstash, Kibana).
 - Configured and maintained server load monitoring dashboards using Grafana.
 - Interviewed 5 applicants, mentored 3 interns, reviewed 100+ resumes and 100+ technical tasks.
- **Pheeb's - Mobile Application Startup** Tehran, IR
Full Stack Web Engineer Sep 2017 - Nov 2019 (2 years)
 - Lead backend engineer of Episode mobile app (20k+ users). Developed Epsiode from scratch using GraphQL and Node.js.
 - Implemented and scaled the backend service of Chizz, a social media web application with autonomous content management and 120k+ monthly active users.
 - Built and shipped Pact Node.js library internally, an inventive mechanism that allowed automatic API generation through predefined schemas.
 - Developed responsive and interactive components for Chizz web client in React.
 - Collaborated with 4 teammates in an agile environment acting as the scrum master.
 - Designed maintainable and scalable databases and caching using MongoDB, Mongoose, and Redis. (30+ collections)
 - Automated testing and deployment of Episode using Docker, Nginx and CI/CD pipelines.
 - Built and organized data analysis and insights dashboards using Metabase to monitor business and product KPIs.

EDUCATION

- **Simon Fraser University** Burnaby, CA
Thesis based Masters in Computer Science; GPA: 3.78 Sep 2020 - May 2023
- **University of Tehran** Tehran, IR
Bachelor of Computer Science; GPA: 3.4 Sep 2015 - Jan 2020

PROJECTS

- **Blogfrog.xyz** Burnaby, CA
A website to randomly discover new blog posts on the internet. Jul 2022
- **ganji.blog** Burnaby, CA
My personal website Mar 2022
- **SchemaIran Telegram Bot - Freelance Project** Tehran, IR
Developed a Telegram bot for Schemairan clinic to conduct YSQ tests online. Collected 10k+ test results. Mar 2022

SKILLS

- **Languages:** Python, JavaScript, TypeScript, SQL, Java, C++, Bash, LaTeX
- **Frameworks:** Node.js/Express.js, React.js, Django, Mongoose, GraphQL
- **Databases:** Relational Databases: PostgreSQL, MySQL, Non-relational Databases: MongoDB, Redis, RabbitMQ
- **CI/CD:** Github Actions, Docker Compose, Gitlab CI
- **Software Knowledge:** Object Oriented Design (OOD), Design Patterns, Distributed Systems, Test-Driven Development (TDD), Data Structures, Algorithms, RESTful API Development, Web development
- **Tools:** Docker, Git, CI/CD, Nginx, Elasticsearch, Logstash, Kibana, Sentry, Grafana, HTML/CSS, JQuery, Figma, Metabase
- **Cloud Infrastructure:** Linux server administration, Amazon AWS, Web Hosting and VPS services
- **Testing:** Unit, integration and end-to-end testing, Mocha, Jest, Tap, JUnit
- **Teamwork:** Agile, Scrum, Kanban, Trello, Notion, Pair Programming, Tech Blogs, Mentoring, Tech Interviews, Documentation