Mohammad Ganji

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EXPERIENCE

Simon Fraser University (SFU) — Burnaby, CA
Research and Teaching Assistant — *Sep 2020 - Dec 2022 (2 years)*

- Led a research paper on testing and debugging asynchronous programs in JavaScript.
- **Designed and implemented a Visual Studio Code extension (in TypeScript) from scratch** to integrate our research approach into a coding environment.
- Instructed and mentored teams of students on **software design patterns and good programming practices** through developing an arcade game in Java as a teaching assistant for CMPT 276 (Intro to Software Engineering course).

CSIL Exam Scheduler - SFU — Burnaby, CA
Web Engineer - Contract Job — *Jun 2021 - Sep 2021 (4 months)*

- Revamped web server and client of SFU CSIL in-lab test scheduling automation using Node.js, PostgreSQL, and EJS.
- **Communicated with SFU CS Faculty and IT staff to collect feedback and make design improvements**.

Yektanet - Digital Advertising Platform (Link) — Tehran, IR
Software Engineer — *Dec 2019 - Dec 2020 (1 year)*

- Scaled, redesigned, and refactored push notification advertising microservice from 5M to 100M daily push notifications, resulting in **15x revenue increase in 1 year**.
- **Architectured large scale efficient databases** (40M+ users, 20+ tables in PostgreSQL) and Redis pipelines to optimize and reduce average query time by 80% for critical, recurring database queries.
- **Coordinated product management, launch, and release a new feature, aka CPC push advertisement, which led to a 30% revenue growth** within a month from initial release.
- Communicated with non-technical internal teams, such as sales, design, account management and product teams.
- Representative for **collaboration with technical teams in other companies to develop 3rd party APIs for external integrations**.
- Set up deployment automation scripts (bash scripts on Linux servers) and 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.

Pheebs - Mobile Application Startup — Tehran, IR
Full Stack Software Developer — *Sep 2017 - Nov 2019 (2 years)*

- Lead backend engineer of Episode (Interactive chat-story entertainment mobile app with 20k+ active users). Developed Episode backend from scratch using GraphQL and Node.js.
- **Implemented backend service of Chizz and redesigned its Client/Server communication architecture for scalability**. (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 modern NoSQL databases. (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
Masters in Computer Science (Thesis based); GPA: 3.89 — *Sep 2020 - Dec 2022 (expected)*

University of Tehran — Tehran, IR
Bachelor of Computer Science; GPA: 3.40 — *Sep 2015 - May 2020*

Projects

- **Blogfrog.xyz** — Burnaby, CA / *Jul 2022*
  A fully front-end website to randomly discover new blog posts on the internet. Scrapes my favorite blogs.

- **ganji.blog** — Burnaby, CA / *Mar 2022*
  My personal website, built from scratch using semantic HTML, CSS, and JavaScript.

- **SchemaIran Telegram Bot - Freelance Project** — Tehran, IR / *Mar 2022*
  Developed a Telegram bot for Schemairan clinic to conduct YSQ tests online. Collected 10k+ test results.

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

- **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