

SADJAD TAVAKOLI

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EXPERIENCES

Simon Fraser University (SFU)

Burnaby, Canada

Research and Teaching Assistant

Sep. 2020 - Apr. 2023

- Conducted a research paper on a hybrid change impact analysis technique for Node.js applications
- Developed a change impact analysis tool, called Caprese, using Java and Node.js

Intelligent Information Solutions Center (IIS)

Tehran, Iran

Software Engineer

Nov. 2018 - Sep. 2020

- Developed and maintained front-end and back-end features using Django, PHP, MongoDB, and JavaScript.
- Delivered external APIs using Django REST Framework (DRF).
- Refactored chat service and user-server interaction to use Websocket instead of API calls.
- Pushed forward the project architecture refactoring process from microservice to monolithic.
- Migrated map service from Google Maps to a local one.

Shopgram

Tehran, Iran

A social commerce platform. This project was later rebranded as SnappShop, which currently is one of the most advanced online shopping platforms in Iran with 100K+ active users and 20K+ daily visits.

Software Engineer

Apr. 2019 - Sep. 2019

- Refactored and developed chat service implemented by Django Channels.
- Refactored and wrote unit and integration tests, which increased test coverage from 15% to 60%.
- Refactored two main models and their related views regarding code smells and anti-patterns.

Lyan

Tehran, Iran

A social commerce startup accelerated by SUT. Lyan was later pivoted as Shopgram.

Team Lead and Product Owner

Apr. 2017 - Dec. 2017

- Managed a team of five to design and develop two applications (Android and iOS) with 100+ APIs.
- Managed product ownership, including backlog, roadmap, and product release planning using Taiga, based on Scrum and Kanban principles.
- Collaborated with the marketing team to identify their needs and define product deliverables and release milestones.

Software Engineer

Nov. 2015 - Dec. 2017

- Involved in the full project life cycle to design, develop, and deploy 300+ APIs and 80+ database models, using Django, DRF, and PostgreSQL.
- Wrote and maintained unit and integration tests with $\sim 95\%$ coverage.
- Mentored and managed 10+ interns and less experienced software engineers.
- Reviewed 200+ merge requests and coding tasks.
- Technical team representative to the marketing team.

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, HTML/CSS, C/C++, L^AT_EX, Bash, SQL, PHP

Tools/Frameworks: Django REST, Nodejs, jQuery, Express.js, Git, Docker, MongoDB, PostgreSQL, Jenkins, React, Project Management Tools (Trello, Jira, GitHub, GitLab, and Taiga), RabbitMQ

Knowledge: Agile Methodologies, OOP, Design Patterns, Data Structures and Algorithms, Code Smells

Testing: PyTest, JUnit, Mocha, Jest, Tap

OS: Linux, MacOS, Windows

EDUCATION


Simon Fraser University (SFU)

Sep. 2020 - Apr. 2023

Master of Computing Science, GPA 3.5/4

BC, Canada

- **Research Topic:** A hybrid change impact analysis technique for Node.js applications.
- **Research Areas:** Software Engineering, Software Analysis, Change Impact Analysis, Dynamic Analysis, Pattern Detection, Mining Software Repository
- **TA Experiences:** Intro to Software Engineering (CMPT 276); Web-based Information Systems (CMPT 470)

Sharif University of Technology (SUT) 

Sep. 2013 - Sep. 2019

Bachelor of Software Engineering

Tehran, Iran

- **Thesis:** Computing the Cultural Distance between Countries by Mining Twitter Data
- **TA Experiences:** Fundamentals of Programming (C Language)
- **Publication:** Issa Annamoradnejad, MohammadAmin Fazli, Jafar Habibi, and Sadjad Tavakoli. Cross-cultural studies using social networks data *IEEE Transactions on Computational Social Systems*, 6(4):627–636, 2019