

# SADJAD TAVAKOLI

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## EXPERIENCES

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### 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/back-end features and external APIs using Django, Django Rest Framework (DRF), PHP, MongoDB, and JavaScript.
- 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, focused on the integral parts, 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 5** to design and develop two mobile 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 lifecycle** to design, develop, and deploy **300+ APIs** and **80+ database models**, using Django, DRF, and PostgreSQL.
- Wrote and maintained unit and integration **tests with ~ %95 coverage**.
- **Mentored and managed 10+ interns** assigned by the Sharif University of Technology as a part of their education and less experienced software engineers.
- **Reviewed 200+ merge requests and coding tasks**.
- **Technical team representative** to the marketing team.

## TECHNICAL SKILLS

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**Languages:** Python, JavaScript, Java, HTML/CSS, C/C++, L<sup>A</sup>T<sub>E</sub>X, Bash, SQL, PHP

**Tools/Frameworks:** Django Rest Framework, Nodejs, jQuery, Express.js, Git, Docker, MongoDB, PostgreSQL, Jenkins, React, Project Management Tools (Trello, Github, Gitlab, and Taiga), RabbitMQ

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

**Testing:** PyTest, JUnit, Mocha, Jest, Tap

**OS:** Linux, MacOS, Windows

## EDUCATION

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### Simon Fraser University (SFU)

*Sep. 2020 - Apr. 2023*

*Master of Computing Science Under the Supervision of Dr. Saba Alimadadi, 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 Under the Supervision of Dr. MohammadAmin Fazli*

*Tehran, Iran*

- **Thesis:** Computing the Cultural Distance between Countries by Mining Twitter Data (*Published in IEEE*)
- **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