

# Hadi Sinaee

+1 (604)-347-8559 | sinaee.hadi@gmail.com | linkedin | github | Canada

I am a **software engineer** with **5 years** of experience in building **distributed systems** and **infrastructures**. Also, I hold a Master's degree in Computer Science from the University of British Columbia.

## WORK EXPERIENCE

### Graduate Research Assistant - Systems Software Engineer

Systopia Lab, University of British Columbia

Jan 2021 - Oct 2023

- **Thesis:** Implemented 2GP, a graph partitioner using C++17 and OpenMP, achieving 70% higher quality partitioning than the state-of-the-art.
- Implemented a Raft library in Go from scratch to build a distributed **key-value** database.
- Extended an open-source **Function-As-A-Service (FaaS)** profiler to support Knative along with OpenWhisk.
- Used eBPF for auditing file system events for a new file system indexer, capturing metadata around each file event and storing it in a graph database for data analytics.

### Senior Software Engineer, Core Platform

Ostadkar, A Marketplace for Home Services

Mar 2019 - Feb 2020

- Led the migration from a monolithic to a microservices architecture, applying **Domain-Driven Design (DDD)** principles to determine microservices. I used **Kafka** for pub-sub and event-sourcing within the microservices architecture.
- Implemented and maintained **REST APIs** using **Flask**, with **Gunicorn**, **SQLAlchemy** and raw **SQL** when necessary.
- Implemented and maintained **Go** microservices, which uses **gRPC** for inter-service communication, **GORM** for ORM, and **Gorilla/mux** for **REST APIs** for internal tools.

### Senior Software Engineer, Marketplace Product

Ostadkar, A Marketplace for Home Services

Jul 2018 - Feb 2020

- Maintained and enhanced features of a live **Node.js GraphQL** server API using **Apollo**.
- Worked with **MongoDB** using the **mongoose** library.
- Implemented unit tests using **jest** to ensure the functionality of the system.

### Software Engineer - Co-Founder

HodHod IM, Instant Messaging Application

Jul 2015 - Jul 2018

- Designed and implemented an instant messaging application.
- Worked on microservices written in **Go** and **Node.js**. I used **gRPC** for our microservice communication, **ExpressJS** for our **REST APIs** for our advertisement platform.
- Worked with **MongoDB** and **MySQL** for storing our non-relational and relational data models, and **Redis** for caching purposes.

## EDUCATION

### University of British Columbia

M.Sc. in Computer Science, Systems, supervised by Prof. Margo Seltzer

Jan 2021 - Oct 2023

### Sharif University of Technology<sup>1</sup>

M.Sc. in Computer Science, Machine Learning

Sep 2013 - Feb 2016

## SKILLS

**Languages:** Go / Golang, Python, C, C++,

**Technologies:** Docker, Kubernetes, Knative, Kafka, Redis, MongoDB, Django, Flask, Terraform

**Misc.:** Git, CI/CD, OpenMP, Nginx, gRPC, AWS

---

<sup>1</sup>It is considered as the nation's most prestigious and leading institution for STEM fields.