

Vahid Mostofi

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Calgary, CA

HIGHLIGHTS OF RELEVANT EXPERIENCE AND EXPERTISE

I am passionate about software development and distributed systems and microservice applications. I also have experience working on social media and graphs. I have more than five years of experience in software development in different programming languages (e.g. **Go**, JavaScript, Python, **Java**). Since 2019 I have focused on designing and developing various backend systems that are robust, testable, efficient, and easily maintainable. I enjoy designing, configuring and optimizing applications with multiple modules that communicate through different channels to achieve a single goal.

- I am a quick learner and can quickly pick up programming languages and cloud-based technologies. I started to learn **Go** and **Kubernetes** at the beginning of my second master's because I wanted to create an improved pod auto-scaler for Kubernetes, and it resulted in an auto-scaler that can reduce the cost of deployment by 25% in our experiments.
- I have experience in converting the software requirements to final products by setting up milestones and collaborating with team members and individuals in other teams in different time zones.
- I have experience in starting a project from scratch and completing it alone as I did in both my masters, leading to two theses and multiple papers.
- I enjoy occasional writing of blog posts to provide solutions for famous problems, particularly in the topic of performance of distributed systems (e.g. Running tcpdump inside Docker Swarm or Authentication Middleware in Express Gateway using JWT).
- I experience working with different Python/Data-science related libraries like **Numpy**, **scikit-learn**, **Pandas** for my different projects. Also, I have experience designing and implementing **Deep Learning** models for against various datasets, such as images, texts and **financial** data for both research and industry based projects.
- Linux has been my primary choice as the operating system for the past ten years, and I enjoy automating my typical tasks through scripting.

EDUCATION

- **Master of Computer Engineering** Calgary, CA
University of Calgary *Sep. 2019 – Sep. 2021*
 - **Microservice Configuration Tuner**: Design and implementation of optimal resource allocator for microservice applications (developed in **Go**).
 - **Custom Kubernetes Auto-Scaler**: Design and implementation of a smart hybrid pod auto-scaler for Kubernetes (developed in **Go**).
- **Master of Computer Engineering** Tehran, IR
Shahid Beheshti University *Sep. 2017 – Aug. 2019*
 - **Generating Heterogeneous Graphs**: Generating heterogeneous graphs exploiting **Deep Generative Models** (GAN) using **Python**, **Tensorflow** and **Keras**.

EXPERIENCE

- **Seequent (Bentley Systems)** Calgary, CA
Fulltime Software Engineer *Sep. 2021 –*
 - **Microservices**: Part of a team to break down a monolithic application into various microservices in cloud native ecosystem.
 - **Auto-Scalers**: Enabled and integrated event-based auto-scaling using Keda.
 - **Languages and Technologies**: Python, Kubernetes, Terraform, Github, Keda.

- **Advertiise** Calgary, CA
Freelance Backed Developer *Feb. 2021 - Apr. 2021*
 - **Backend Developer:** Finalizing and maintenance of the REST API based backend.
 - **DevOps:** Implementing the CI/CD pipeline.
 - **Languages and Technologies:** NodeJS, GitLab CI/CD, MongoDB, Heroku.
- **AlgoFactory** London, UK
Freelance Model Developer *Aug. 2020- Nov. 2020*
 - **Developer:** Development and implementation of auto-trading algorithm based on **financial data** in QuantConnect platform.
 - **Infrastructure:** Improve the performance of offline testing using containerization.
 - **Languages and Technologies:** Python, Docker, QuantConnect.
- **Rahnema** Tehran, IR
Freelance Backend Developer *Apr 2019 - Jul 2019*
 - **Backend Developer:** Designing and developing an Applicant Tracking System.
 - **DevOps:** Implementation of CI/CD pipeline for separate backend and frontend deployment.
 - **Languages and Technologies:** Java Spring Boot, Jenkins, OAuth2.0, MySQL Database, Nginx.
- **Rahnema** Tehran, IR
Machine Learning Internship *Nov 2018 - Mar 2019*
 - **Recommendation System:** Designing and development a recommendation system for a push notification app as part of a group.
 - **Image Classification:** An image classification task for a **Kaggle** competition of identifying individual Whales based on the pattern of their tails. Used Siamese network to train a distance metric learning model. The model finished with a **bronze medal in the top 6%**.
- **YOUTABGAMES** Tehran, IR
Co-founder, developer *Aug 2015 - July 2017*
 - **Game Designer/Developer:** Designed, developed and published three arcade games for Android and iOS using swift, cocos2d-x and Unity. Video of a sample game available at Youtube.

NOTABLE SIDE PROJECTS

- **Nginx wrapper for monitoring http requests:** Spring 2021, A pluggable wrapper on Nginx that enables monitoring and reporting HTTP request information (i.e. response times, status) through **Telegraf** to different outputs. (Available at Github)
- **Distributed link prediction using node embedding:** Fall 2019, Design and implementation (using **Python** and **Apache Spark**) of an algorithm for distributing the process of node embedding to achieve link predication in **large graphs** (Available at Github)
- **Search engine for Stackoverflow dataset:** Winter 2017, A search engine using Apache **Lucene** (developed in **Java**) for Stackoverflow public dataset. The search engine could be queried based on different properties like, answers, questions, tags
- **Automatic level generator for the Angry Bird game:** Fall 2017, Creating a configurable and automatic level generator for Angry Birds, levels are randomly generated, playable, and physically stable. (Available at Github)

PROGRAMMING LANGUAGES / FRAMEWORKS / TECHNOLOGIES

- **What I have been using mostly in past three years:** Go, Python, Docker, Kubernetes, AWS, Linux environment, Bash scripting, Java, Javascript-NodeJS, SQL, Data Science related Python libraries.