

Seyed Morteza Hosseini

SOFTWARE ENGINEER · RESEARCHER

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Education

University of Calgary

M.S. IN COMPUTER SCIENCE

Calgary, Canada

September 2021 - Present

- **Research:** Flow Size Prediction in Short time scales through workload behaviour

Shahid Beheshti University

B.S. IN COMPUTER SOFTWARE ENGINEERING

Tehran, Iran

September 2015 - January 2020

- **Thesis:** Sequence Mining on Business Processes using Deep Neural Networks

Work Experience

University of Calgary

RESEARCH ASSISTANT

Calgary, Canada

September 2021 - Present

- Working on accelerating and monitoring network performance of different distributed systems such as distributed machine learning platforms, spark, storage engines, etc.
 - Extracted system traces when a specific workload is running on the network
 - Extracted time-series from the traces and perform future forecasting on the time-series
 - Xgboost and PyTorch are used for forecasting
 - Examined workloads are Spark, Distributed Deep Learning Training, etc.
 - Using eBPF to extract low-level system traces

CafeBazaar

TEAM LEADER

Tehran, Iran

September 2020 - August 2021

- Leading real estate vertical team of Divar. a team of 17 people, Consisting of different professions such as software engineers, data scientists, and UX designers.
- 1st Real Estate vertical classified product of iran in case of active users, total requests, ads count.
- Responsible for deciding on technical problems, technical quality, team delivery, and members' growth.

CafeBazaar

SOFTWARE ENGINEER

Tehran, Iran

October 2018 - August 2020

- Software Engineer at infra team in Divar (a part of CafeBazaar group), the leading classified advertisement platform and the most popular app in Iran with more than 20 million users on all platforms.
- Designer and system owner of ad search and submission stack. Streamlined the whole process, so Divar can handle more requests from users. Designed different features in submit forms to reach a compelling UX experience for users.
 - Worked extensively on systems written in Python and Go.
 - Worked with data systems such as Elasticsearch and Postgresql.
 - Used Kubernetes as orchestration system, for deployment of microservices, API gateways and some of our databases (such as MongoDB or Redis)
 - Managing CI/CD pipelines of these projects for ease of development for other team members.
- Responsible for interviewing new software engineer candidates and improvement of the technical interview process.

CafeBazaar

INTERN

Tehran, Iran

June 2018 - August 2018

- On-site summer internship.
- Learned SRE and advanced software development concepts.

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SOFTWARE ENGINEER

Tehran, Iran

February 2016 - June 2017

- Software Engineer in LakLak team (a social network for pregnant woman).
- Responsible for frontend and backend of LakLak.
 - Worked on the backend code which was on NodeJs and Frontend.

Notable Courses

CERTIFICATIONS

Deep Learning Specialization

Coursera

UNIVERSITY COURSES

Compiler Design	A+
NoSQL Databases	A+
Algorithms Design	A+
Internet Engineering	A+
Programming Languages Design	A+
Data Mining	A
Computer Security	A+
Randomized Algorithms	A
EXTRA ONLINE COURSES	
Cloud Computing	<i>Coursera</i>
Introduction To Deeplearning	<i>MIT 6.S191</i>
TensorFlow Developer	<i>Deeplearning.ai</i>

Projects

Bachelor Thesis Project

FINDING BOTTLENECKS OF BUSINESS PROCESSES USING DEEPLARNING METHODS

- LSTM-based network
- Extract different properties of business processes and forecast the bottlenecks of an ongoing process
- Under the supervision of Dr. Sadegh Aliakbari

Virtual Background System

BEST PROJECT OF DIVAR INTERNAL HACKATHON

- Applying different filters on the output of computer's camera and create a input for video conferencing applications
- Filters are in different type, from simple canny to a full background extraction with BodyPix model

Web Testing Framework

FOR THE ICT MINISTRY OF IRAN

- Creates tests for web pages visually and generating reports on test results
- It was mainly developed to test government websites
- Under the supervision of Dr. Hasan Haghighi

C-Like Lang Compiler

COMPILER COURSE PROJECT

- Down-scoped C language compiler
- Under the supervision of Dr. Jaberipur

Race Finder

COMPUTATIONAL INTELLIGENCE COURSE PROJECT

- Used FaceNet to find the human race by photo
- Under the supervision of Dr. Malek

Drone

SHAHID BEHESHTI UNIVERSITY AI & ROBOTICS LAB

- Founded the AI and Robotics lab of our faculty with colleagues and built a remote controllable drone for the first project.
- Under the supervision of Dr. Abdoos

Skills

Programming	Expert in Go, Python, Bash-Scripting, SQL, Git.
Software Engineering	Working knowledge in Javascript, Lua, CUDA, C/C++, Java, SQL, LATEX
	Familiar with various object-oriented design patterns, software development methodologies such as Agile and DevOps and, functional programming
Theoretical	Design of Algorithms, Data Structures, and Discrete Mathematics.
	Working Knowledge in Machine Vision with Deep Learning, Sequence Processing networks such as RNN, LSTM
Languages	English (Full professional proficiency), Persian (Native)
Machine Learning	Expert in Pytorch, Pandas, Numpy, OpenCV
Web	Expert in Django, Flask, Sanic, and NodeJS. Familiar with CSS, HTML, VueJS
Site Reliability Engineering	Linux System Administration, eBPF, Kubernetes, Docker, NGINX, Computer Networks
	Violin And Viola Player,
Other	Familiar with Wood Carving,
	Highly motivated and eager to learn new things. Ability to work as an individual as well as in group.

Teaching Experience

TEACHING ASSISTANTSHIP

2022	Computer Networks, Professor Majid Ghaderi , Responsible for TA sessions and workshops, and Grading computer assignments	Fall 2022
2021	Introduction to Computer Science for Multidisciplinary Studies I, Dr. James Tam , Held TA sessions and workshops, Graded computer assignments	Fall 2021
2019	Programming languages, Dr. Vahidi-Asl , Held TA sessions and workshops, Graded computer assignments	Spring 2019
2018	Compiler Design, Dr. Jaberipur , Held TA sessions and workshops, Graded assignments	Spring 2018
2018	Advanced Programming, Dr. Aliakbary , Determined and graded the course projects	Spring 2018
2018	Algorithms Design, Dr. Ghavimizadeh , Held TA sessions and workshops, Graded computer assignments	Fall 2018
2017	Discrete Mathematics, Dr. Abdoos , Held TA session, Graded assignments	Spring 2017
2017	Data Structures, Dr. Ebrahimi Moghaddam , Graded computer assignments, Graded assignments	Fall 2017
2016	Discrete Mathematics, Dr. Safaei , Held TA session, Graded assignments	Fall 2016
2016	Fundamentals of Programming, Dr. Aliakbary , Graded computer assignments	Fall 2016

OTHER

2017	JavaScript Instructor, Jahesh Academy , JavaScript course held by Jahesh on Amirkabir university campus	August 2017
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Honors and Awards

2022	Department Research Award , University of Calgary	Calgary
2018	2nd Place , HDC National Challenge	Tehran
2017	Participant , IranOpen @Work League	Tehran
2015	1st Place , Shahid Beheshti University Local Programming Contest	Tehran
2015	1st Place , Shahid Beheshti University AI Challenge	Tehran
2012	1st Place , FarzCup Soccer Simulation 2D	Tehran
2012	8th Place , IranOpen Soccer Simulation 2D	Tehran