

Iman Tabrizian

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EDUCATION

UNIVERSITY OF TORONTO

MASc IN ELECTRICAL AND

COMPUTER ENGINEERING

2019 - 2020 (Expected) | Toronto, CA

GPA: A+ (2 / 5 Courses)

AMIRKABIR UNIVERSITY

BS IN COMPUTER ENGINEERING

2014 - 2018 | Tehran, Iran

GPA: 17.97 / 20

RESEARCH INTERESTS

Software-Defined Networking

Cloud Orchestration

Systems for Machine Learning

LINKS

Github:// [Tabrizian](#)

LinkedIn:// [tabrizian](#)

StackOverflow:// [iman](#)

SKILLS

PROGRAMMING

Over 5000 lines:

Java • Python • Javascript

Android • Node.js

C • C++ • VHDL • PHP

Over 1000 lines:

Golang • CSS • Assembly

Familiar:

MySQL • Verilog • MongoDB

FRAMEWORKS

Kubernetes • Docker • Swarm

PyTorch • Tensorflow

Prometheus • Hapi.js

OpenStack • Open vSwitch •

Mininet • Vue.js

HONORS & AWARDS

- Edward S. Rogers Sr. Admission Scholarships
- Top 10% in terms of cumulative G.P.A (2018)
- Offered direct admission to continue graduate studies (2018)
- Eligible to choose second major (2018)
- Ranked 1st among all entrance university students in 14th Amirkabir ACM-ICPC (2014)

RESEARCH & DEVELOPMENT EXPERIENCE

AUT IOT LABORATORY | RESEARCHER & DEVELOPER

Jan 2016 – Nov 2016 | Tehran, Iran

- Experimenting with Kaa to provide a Building Automation solution. This project used nRFs for providing connectivity for sensors and used Raspberry Pi as the gateway which connected to the internet.
- Development of an IoT platform with the ability to support logging, event triggering, scenario creation. It was based on the MQTT protocol for the reliable and bidirectional communication between IoT devices. Under supervision of **Prof. Bahador Bakhshi**

ANDISHE FARTAK AMIRKABIR | DEVELOPER OPERATIONS

September 2018 – December 2018 | Tehran, Iran

- Setup a CI / CD pipeline for automatic deployment to Kubernetes using drone.io
- Migrated all of the web applications to Kubernetes
- Setup a 3 node Kubernetes Cluster
- Setup of Rook as the storage orchestration
- Modification of CoreDNS configuration to deal with enterprise proxy

FARZAN FAN ANDISH FARDA | RESEARCHER & DEVELOPER

Jun 2016 – December 2018 | Tehran, Iran

- Development of a product for remote management of 250 welding robots for IKCO - leading car company in Iran. The solution that we proposed simplified the provisioning process extremely and helped them increase the number of welding robots in each production line.
- R&D for development of an IoT based assembly platform which eased the production of hard to assemble products. This platform used MQTT as the messaging broker and Node.js as the backend providing restful web services for things connecting to them.

PROJECTS

AN AUTO-SCALER FOR DOCKER SWARM | PYTHON

Final year dissertation

Developed an auto-scaler for Docker Swarm with support for any criterion. This project used Prometheus as the monitoring and time-series data collection. Acted upon the alertmanager notifications and scaled the Swarm Cluster upward/downward. Project source code is located at github.com/Tabrizian/swascale.

DEEPFLOWER | PYTHON, PYTORCH

Training of a classification algorithm to detect the type of flower from 102 types available. I was able to achieve 93% accuracy by using DenseNet and retraining DenseNet on the dataset available for the flowers. Training of DenseNet was performed on the GPU instances available in Google Cloud Platform. This was the final part of the Udacity PyTorch challenge.

LANGUAGES

English: professional working proficiency (TOEFL iBT 107)
Persian: Native proficiency

COURSEWORK

UNDERGRADUATE

Computer Networking (18.3 / 20)
Operating Systems (17.9 / 20)
Data Structures & Algorithms (20 / 20)
Algorithm Design (20 / 20)
Theory of Machines & Languages (18.5 / 20)
Engineering Statistics (19.7 / 20)

GRADUATE

Algorithms for Complex Networks (16.7 / 20)
ECE1508 A+
ECE1548 A+

SVOP | GOLANG

Development of a platform to create overlay networks to experiment with novel VNF deployment and resource scheduling algorithms. This platform leverages YAML files for description of overlay topology and VNF deployments. It is an open source project and can be viewed at github.com/tabrizian/SVOP

BAMBOO | NODE.JS

Bamboo is an IoT platform whose architecture is based on microservices. I was the architectural designer of bamboo and how components should be divided. It is using MQTT message broker for connectivity. You can find out more about it github.com/bambil/bamboo.

IRAN METRO | ANDROID

A transportation application for Iran subway system. It currently has more than 20,000 active users. It was selected as the BESTS APP of THE WEEK by cafebazaar (Iranian Android Market) when it was launched.

TEACHING EXPERIENCE

UOFT | TA WEB PROGRAMMING COURSE (CSC309)

Jan 2019 - April 2019 | Toronto, CA

AMIRKABIR UNIVERSITY OF TECHNOLOGY | TA DATABASE DESIGN COURSE

Spring 2017 | Tehran, Iran

AMIRKABIR UNIVERSITY OF TECHNOLOGY | TA ADVANCED PROGRAMMING WITH JAVA

Spring 2016 | Tehran, Iran

AMIRKABIR UNIVERSITY OF TECHNOLOGY | TA INTRODUCTION TO COMPUTER NETWORKS

Spring 2018 | Tehran, Iran

AMIRKABIR UNIVERSITY OF TECHNOLOGY | TA INTRODUCTION TO PROGRAMMING WITH C

Fall 2015 | Tehran, Iran

ROUZBEH HIGH SCHOOL | INTRODUCTION TO PROGRAMMING WITH C++

2014 - 2017 | Tehran, Iran

EXTRA CURRICULAR ACTIVITIES

OPENIOT SUMMIT NORTH AMERICA | SPEAKER

2018 | Portland, Oregon

I was invited to speak at OpenIoT Summit North America about On the Air Firmware Update Using MQTT.

UNDERGRAD TALKS | SPEAKER

2018 | Amirkabir University of Technology

I had a 40 minutes talk with the title **What is Cloud Orchestration?**. This presentation included the current approach to cloud orchestration and presentation of some infrastructure as code templates.

8TH LINUX FESTIVAL | VIRTUALIZATION WORKSHOP

2017 | Amirkabir University of Technology

I was the instructor about the virtualization technologies in general and how to use Docker specifically for containerization.

NODE.JS SUMMER COURSE | INSTRUCTOR

Summer 2017 | Computer Department Scientific Committee

Teaching Node.js basics from the ground to web application and bot development.