Iman Tabrizian

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EDUCATION

AMIRKABIR UNIVERSITY

BS in Computer Engineering
2014 - 2018 | Tehran, Iran
Cum. GPA: 17.97 / 20

RESEARCH INTERESTS

Internet of Things
Cloud Orchestration
Software Defined Networking

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:
CSS • Assembly
Familiar:
MySQL • Verilog • MongoDB

FRAMEWORKS

ONOS • Docker • Swarm
Kaa IoT Platform
Lelylan IoT Platform •
OpenStack • Open vSwtich •
Mininet • Hapi.js • Vue.js

AWARDS

- Admission to University of Toronto ECE department
- top 10% in terms of cumalative G.P.A
- Offered direct admission to continue graduate studies
- Eligible to choose second major
- Ranked 1^{st} among all entrance university students in 14^{th} Amirkabir ACM-ICPC
- Top 0.7% in the national university entrance exam

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**

FARZAN FAN ANDISH FARDA | Researcher & Developer

Jun 2016 – Current | 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

GENORCH | Python

Development of a generic orchestration platform with the ability to auto scale the infrastructure of an application based on the user defined criteria. It is written extremely modular and currently supports OpenStack It is an open source project you can view the source code: github.com/genorch/orchestration It was tested on SAVI (testbed of University of Toronto).

AN AUTO-SCALER FOR DOCKER SWARM | Python

Final year dissertation

In this project I provided an auto-scaler for Docker Swarm. Currently, Docker Swarm doesn't provide any automatic horizontal scaling of containers and only load balances between static number of containers. In this project I'm supposed to provide an auto-scaler for Docker Swarm which enables developers to definedefine the automatic scaling policy of their applications. a criteria and an action that should be taken on this criteria to

BAMBOO | Node.js

Bamboo is an IoT platform whose architecture is based on micro-services. I was the architectural designer of bamboo and how components should be divided. It is using MQTT message broker for connectivity. You can findout more about it here.

LANGUAGES

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

TEACHING

- Teaching Assistant 3x
- Instructor of Programming with C++ at Rouzbeh High School for 3 years.

IRAN METRO | Android
A transportation application for Iran subway system. In 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.

MERGER | Node.js
This project was developed based on the request from the ICT of Amirkabir University of Technology. **Merger** fetches data from the different academic sources namely, elsevier, IEEE and crossref, merges this data into a unified format and converts them to appropriate database models.

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.

7TH LINUX FESTIVAL | Linux Basics Presenter
2016 | Amirkabir University of Technology
I had a 20 minutes talk about code editing in Linux and about best practices in code editing.

REFERENCES

BAHADOR BAKHSHI | Assistance Professor
Amirkabir University of Technology, Department of Computer Engineering and Information Technology
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MEHDI DEHGHAN | Professor
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