

# Parham Alvani

PHD STUDENT · BACKEND DEVELOPER

□ (+98) 939-09-09-540 | □ parham.alvani@gmail.com | □ https://1995parham.me | □ 1995parham | □  
1995parham | □ parham-alvani | □ parham.alvani | □ 1995parham

*"I have a dream"*



## Summary

Current Backend Enginner at ride hailing company Snapp. 3+ years experience specializing in the backend development, system design. Super nerd who loves Vim, Linux and OS X and enjoys to customize all of the development environment. Interested in Network Function Virtualization, Optimization, Software Defined Networking.

### PROGRAMMING LANGUAGES AND TECHNOLOGIES

- Golang & C (Expert)
- AMD64 Assembly (Expert)
- Nodejs & Python (Specialist)
- Laravel (Skilled)
- Angular (Specialist)
- Ubuntu, Docker & Kubernetes (Expert)
- Rust (Beginner)

### NETWORKING TOOLS AND PROTOCOLS

- OpenFlow1.3, OpenFlow1.5
- ONOS Platform, FloodLight, Ryu
- Mininet

## Work Experience

### Iranian Telecommunication Research Center (ITRC)

Tehran, Iran

Summer 2016

#### TRAINEE

- Designed and implemented the home automation solutions using the Raspberry Pi

### IoT Working Group of Amirkabir University of Technology

Tehran, Iran

Jul. 2017 - Jun. 2019

#### SYSTEM ARCHITECT & SOFTWARE ENGINEER

- Designed the scalable IoT Platform that can handle 1K rps with Golang
- Run services with Docker on bare-metals and monitored them using Prometheus

### Snapp!

Tehran, Iran

Feb. 2019 - Present

#### BACKEND ENGINEER

- Developed location based system that handles high load
- Designed and Developed surge pricing system that consumes 6K messages per second with Golang

## Honors & Awards

### ACADEMIC

- 2016 **4th Place**, Semi-Final National Scientific Olympiad in Computer Engineering  
2016 **10th Place**, Final National Scientific Olympiad in Computer Engineering

Tehran, Iran

Tehran, Iran

### COMPETITION

- Spring 2016 **2nd Place**, 3rd National Digital Design Contest of Iran ASIC League Tehran, Iran  
Spring 2016 **3rd Place**, 3rd National Digital Design Contest of Iran CoDesign League Tehran, Iran  
Spring 2015 **3rd Place**, 2nd National Digital Design Contest of Iran CoDesign League Tehran, Iran  
Fall 2014 **3rd Place**, 14th Amirkabir ACM International Collegiate Programming Contest (ICPC) Tehran, Iran  
Fall 2014 **Merit Medal**, 39th Asia Regional ACM International Collegiate Programming Contest (ICPC) in Sharif University of Technology Tehran, Iran

## HIGH SCHOOL

2012	<b>Semi-finalist</b> , National Mathematics and Computer Olympiads	Tehran, Iran
2011	<b>Finalist</b> , National Mathematics and Computer Olympiads	Tehran, Iran
2010	<b>Finalist</b> , National Mathematics and Computer Olympiads	Tehran, Iran
2010	<b>Merit Award</b> , International Mathematics Competition (IMC)	Icheon, S.Korea

## Teaching Experience

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### Principles of Computer and Programming

TEACHING ASSISTANT

Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018, Spring 2019, Fall 2019

Amirkabir University of Technology

Under Supervision of Prof. Bakhshi

### Advanced Programming

TEACHING ASSISTANT

Spring 2015, Spring 2016, Spring 2018

Amirkabir University of Technology

Under Supervision of Prof. Noorhosseini

### Discrete Mathematics

TEACHING ASSISTANT

Spring 2015

Amirkabir University of Technology

Under Supervision of Prof. Fallah

### Introduction to Python Programming

INSTRUCTOR

Spring 2015

7th Amirkabir Linux Festival

### Principles of Database Design

TEACHING ASSISTANT

Spring 2016, Spring 2017

Amirkabir University of Technology

Under Supervision of Prof. Momtazi

### Microprocessor I

TEACHING ASSISTANT

Spring 2016, Spring 2018, Fall 2018, Spring 2019

Amirkabir University of Technology

Under Supervision of Prof.

Homayounpour

### Engineering Statistics and Probability

TEACHING ASSISTANT

Spring 2016

Amirkabir University of Technology

Under Supervision of Prof. Amir Haeri

### Introduction to Golang Programming

INSTRUCTOR

Spring 2016

8th Amirkabir Linux Festival

### IoT & IPv6

SPEAKER

Spring 2016

8th Amirkabir Linux Festival

### Principles of Database Design

TEACHING ASSISTANT

Fall 2016

Amirkabir University of Technology

Under Supervision of Prof. Amir Haeri

### Data Structure Design

TEACHING ASSISTANT

Fall 2016, Fall 2017

Amirkabir University of Technology

Under Supervision of Prof. Dehghan

### Computer Architecture

TEACHING ASSISTANT

Spring 2017

Amirkabir University of Technology

Under Supervision of Prof. Shiri

### Introduction to IoT Platform

SPEAKER

Spring 2017

2nd Iran IoT Conference

### Golang, The Future of C

SPEAKER

Spring 2017

9th Amirkabir Linux Festival

## I1820, The IoT Platform

9th Amirkabir Linux Festival

SPEAKER

Spring 2017

## Advanced Python Programming

INSTRUCTOR

Summer 2017

SSC IoT Summer Course

## An Introduction to IoT Platforms

INSTRUCTOR

Summer 2017

SSC IoT Summer Course

## Computer Networks

TEACHING ASSISTANT

Spring 2018, Fall 2018, Spring 2019

Amirkabir University of Technology

Under Supervision of Prof. Sabaei

## Microprocessor Lab

INSTRUCTOR

Spring 2018

Amirkabir University of Technology

Under Supervision of Prof.

Homayounpour

## Computer Networks Lab

INSTRUCTOR

Spring 2018, Fall 2018, Spring 2019

Amirkabir University of Technology

Under Supervision of Prof. Sabaei

## Advanced Programming Workshop

INSTRUCTOR

Spring 2018

Amirkabir University of Technology

Under Supervision of Prof. Noorhosseini

## Operating System Lab

INSTRUCTOR

Fall 2018, Fall 2019

Amirkabir University of Technology

Under Supervision of Prof. Zarandi

## Introduction to Programming Workshop

INSTRUCTOR

Fall 2019

Amirkabir University of Technology

Under Supervision of Prof. Bakhshi

## Research Experience

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### SFC Requests Admission Control by Considering VNFMs

Prof.Bakhshi

MAXIMIZE PROFIT BASED ON AN OPTIMIZATION PROBLEM FOR ACCEPTING SFCs AND CONSIDERS VNFMs FOR THEM

Fall 2019

- M.Sc. Project

### General purpose IoT platform, design for scalability

Prof.Sabaei

RESEARCH AND DEVELOP DISTRIBUTED, DOCKER BASED IoT PLATFORM NAMED I1820

Fall 2017

- B.Sc. Project

### Department-wide platform for IoT and building management systems

Prof.Bakhs

RESEARCH ON DIFFERENT OPERATING SYSTEMS, FRAMEWORKS AND PROTOCOL STACKS IN IoT

2015–2017

- Amirkabir IoT Laboratory (AoLab) resource are available here

### Resource Provisioning in Software Defined Networking

Prof.Shiri

Spring 2016

- This research was done for Research Method and Technical Writings course

## Education

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### Energy Atomic High School

Tehran, Iran

DIPLOMA OF MATH & PHYSICS

Sep. 2009 — Sep. 2013

- GPA: 19.45/20

### Amirkabir University of Technology

Tehran, Iran

B.Sc. IN COMPUTER SOFTWARE ENGINEERING

Sep. 2013 — Sep. 2017

- GPA: 18.94/20

## **Amirkabir University of Technology**

M.Sc. IN COMPUTER NETWORK

- GPA: 18.94/20

Tehran, Iran

Sep. 2017 — Sep. 2019

## **Amirkabir University of Technology**

PH.D. IN COMPUTER NETWORK

- GPA: N/A

Tehran, Iran

Sep. 2019 — Sep. 2023

## **Extracurricular Activity**

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### **Linux Festival**

SCIENTIFIC DIRECTOR

- Seleted the presentors for event
- Coordinated the technical aspects of event

Tehran, Iran

Spring 2016, Spring 2017

### **AUT ICPC**

HEAD OF TECHNICAL TEAM

- Setup the judge server
- Coordinated the clients configuration and setup

Tehran, Iran

Fall 2016, Fall 2017, Fall 2018

### **Amirkabir Programming League**

HEAD OF TECHNICAL TEAM

- Setup the judge server
- Coordinated the clients configuration and setup

Tehran, Iran

Spring 2019

## **Certificate**

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- CompTIA Network+
- Supporting Windows 8.1 (70–688)
- Installing and Configuring Windows Server 2012 (70–410)
- Administering Windows Server 2012 (70–411)
- Configuring Advanced Windows Server 2012 Services (70–412)
- Designing and Implementing a Server Infrastructure (70–413)
- Implementing an Advanced Server Infrastructure (70–414)
- LPIC-1 (101–102)
- LPIC-2 (201–202)
- Cisco CCENT
- VMware vSphere: Install, Configure, Manage
- VMware vSphere: Optimize and Scale