

# Seyed Ali Akhavani

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## Research Interests

- Information Assurance
- Blockchains and Peer-to-Peer Networks
- Privacy Preserving Networked Systems
- Social Networks

## Education

- 2014 – present **B.Sc in Computer Engineering - Information Technology**, *School of ECE, University of Tehran*.  
Last Year's GPA: 17.79/20 (3.81/4) - Last Two Years' GPA: 17.01/20 (3.59/4) - GPA: 15.90/20 (3.15/4)
- 2009 **High School Diploma in Mathematics and Physics**, *Alavi High School*.  
GPA: 19.83/20

## Honors and Awards

- Sept 2018 **Best Undergraduate Project Award**, *University of Tehran*.  
BSc Thesis project about "Constructing and Analyzing Bitcoin Transaction Graph". [Awarded Projects](#)
- Jul 2018 **Elecom Stars 3rd Best Mobile And Web Application Winner**, *Tandori web application*.  
Developed back-end of [Tandori](#) web application which ranked 3rd in Iran [Elecom-Stars](#) Annual Exhibition.
- 2016 **Best Student Chapter In Organizing Contests**, *9th Harekat Festival*.  
I was [official main officer](#) of 2016 University of Tehran's [ACM](#) student chapter (Association for Computing Machinery)
- 2016 **ACM Student Chapter Excellence Award**.  
I was [official main officer](#) of 2016 University of Tehran's [ACM](#) student chapter (Association for Computing Machinery)
- 2016 **Ranked 2nd in XP Game Contest**, *University of Tehran*.  
A contest that simulates planning game. Its goal is to teach agile programming to students via real world problems.
- 2014 **National Universities Entrance Exam (Mathematics and Physics)**, *Iran*.  
Ranked 402th (regional rank) and 681th (national rank) among about 350,000 contestants.
- 2014 **National Universities Entrance Exam (Foreign Languages)**, *Iran*.  
Ranked 57th (regional rank) and 93th (national rank) among about 150,000 contestants.

## Research Experience

- Mar 2018 – Present **Blockchain and Cryptocurrency Analysis**, *Under supervision of Dr. Ghanbari and Dr. Bahrak, University of Tehran*.  
Working on extracting transaction data from different cryptocurrency blockchains. Also analyzing different types of cryptocurrencies' transaction graph, Including Bitcoin and Ethereum.
- Jun – Sept 2017 **Benchmarking and Optimizing Message Systems**, *Under supervision of Dr. Mahini, University of Tehran*.  
Developing and benchmarking different types of message and event systems for micro services. Including message queues, pub-sub messaging, and stateless http messaging.

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## Working Experience

- Jun 2017 – **Software Engineer**, *TAP30*.  
Present **Tap30** is a private-cab e-hailing and ride-sharing platform providing standard and premium logistics services to companies and individuals. My work is categorized into following parts:  
**Data**: Developing automatic pricing model via analyzing requests.  
**Platform**: Developing and benchmarking event passing system for micro services - optimizing binary object storage.  
**Infrastructure**: Setting up distributed cache system, distributed file storage, and containerization.
- Jun 2016 – **Co-Founder and Backend Developer**, *Lambede*.  
Jul 2017 **Lambede** is a platform that connects people who need to find local services, with people who are looking to earn money and ready to work.
- Sept 2014 – **Data Engineer**, *Datanik*.  
Jul 2015 Datanik is a company that provides network and data solutions to third parties. I crawled different movie subtitles and analyzed the difficulty of a movie language level.

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## Volunteer Experience

- Dec 2015 – **Official Officer**, *ACM Student Chapter*, *Treasurer*, University of Tehran.  
Dec 2016 Organizing contests, talks, workshops, and classes including: **UTsec**, Panjere, ACM ICPC, XP Game, Summer Classes, Soft Skills Classes, and F1 Magazine.
- Jul – Sep 2015 **Executive Editor**, *F1 Magazine*, Big Data Issue, University of Tehran.  
**F1** is a quarterly magazine which contains computer science related articles. **Big Data issue** was chosen as the best scientific magazine of University of Tehran
- Jul – Oct 2017 **Mentor**, *ACM Summer of Code*, University of Tehran.  
Teaching web development with Node.js, HTML, and CSS to new computer engineering students which led to "Postchi" web application.
- Sept 2016 – **Network Technician**, *Informatics Center*, University of Tehran.  
Jun 2017 Setting up wired and wireless networks in different university faculties. Also developing **live streaming** system for university.
- Apr 2017 **Executive Assistant**, *FSEN International Conference*, *IPM*.  
Helping different professors from around the world to settle in Iran. Also I was the conference organizer. I was assisting FSEN's keynote speaker **Dr. Henzinger** - **Certificate**
- Dec 2016 – **Consultant**, *ACM Student Chapter*, University of Tehran.  
Dec 2017 Advising new ACM chapter officers to organize contests, talks, workshops, and classes including: Panjere, ACM ICPC, and F1 Magazine.

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## Teaching Experience

- Fall 2018 **Network Security**, *University of Tehran*, **Dr. Sayad**.  
Teaching Assistant - Designing computer assignments, course project, and grading.
- Spring + Fall 2018 **Operating Systems**, *University of Tehran*, **Dr. Kargahi**.  
Teaching Assistant - Designing computer assignments, quizzes, and grading.
- Spring 2018 **Internet Engineering**, *University of Tehran*, **Dr. Khosravi**.  
Teaching Assistant - Designing course main project, and grading.
- Spring 2018 **Software Engineering**, *University of Tehran*, **Dr. Ghasemi**.  
Teaching Assistant - Designing computer assignments, course project, and grading.
- Fall 2015 **Introduction to Computing Systems And Programming**, *University of Tehran*, **Dr. Hashemi** and **Dr. Moradi**.  
Teaching Assistant - Designing computer assignments and grading.
- Summer 2015 **Web UI Design with HTML and CSS**, *University of Tehran ACM Summer Classes*.  
Instructor - Teaching HTML5 and CSS3.
- Summer and Fall 2014 **English**, *Alavi High School*.  
Teaching Assistant - Designing exams, solutions, and handouts.

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## Selected Courses and Grades

- Human and Computer Interaction: 19.8/20
- Network Security: 19.2/20
- Data Structures: 17.7/20
- Microprocessors: 17.25/20
- Internet Engineering: 19.3/20
- Game Theory: 18.6/20
- Data Transmission: 17.6/20
- Statistical Inference (Graduate): 17/20

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## Selected Projects

2016 - 2017 **Tandori.**

A social media for foods and drinks. Selected as 2nd best web application in Elecom-Stars. Using Node.js [Github Repo](#)

2018 **Sands of Time.**

A module that modifies system time for different processes. Written in C and Node.js [Github Repo](#)

Summer 2017 **Digikala Crawler.**

An application that crawls [Digikala](#) (Iranian Amazon) and fetches newest sales then notifies the user via a Telegram Bot. Using Node.js [Github Repo](#)

Spring 2017 **Akbar Ticket**, *Course Project*, Internet Engineering, [Dr. Khamespanah](#).

A flight ticket selling service. Java is used in back-end. AngularJS is used in front-end. [Gitlab Repo](#)

Spring 2017 **Multiplayer Snake**, *Course Project*, Computer Networks, [Dr. Khonsari](#).

An application that supports up to 4 people to login and play multiplayer snake. Using Java and Python via Sockets. [Github Repo](#)

Spring 2017 **DNS Server**, *Course Project*, Computer Networks, [Dr. Khonsari](#).

A Complete DNS Server with Agent, Roots and TLDs. Using Java. [Github Repo](#)

Spring 2017 **Linux Kernel Modification**, *Course Project*, Operating Systems, [Dr. Kargahi](#).

Optimizing Linux kernel scheduling. Also add priority based semaphore policies to Linux kernel. [Github Repo 1](#) [Github Repo 2](#)

Spring 2016 **Dimon.**

Dimon is an application that encrypts data in ultraviolet sound and clients can send money to each other via their phone's speaker and recorder. Using Node.js. [Gitlab Repo](#)

Fall 2015 **Search and Rescue**, *Course Project*, Data Structures and Algorithms, [Dr. Khamespanah](#).

An application that uses advanced path finding algorithms to rescue injured people in the map.

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## Computer skills

### Programming Languages:

Advanced Node.js, Java, JavaScript, R, C/C++

Familiar Python, Verilog,  $\LaTeX$ , MATLAB

### Tools and Frameworks:

Advanced Adobe Photoshop, MongoDB, PostgreSQL, Apache Tomcat, Maven

Familiar Django, Ruby on Rails, Vue.js, AngularJS, WordPress

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## Language Skills

English Fluent

TOEFL: 108 (Reading: 27 - Listening: 30 - Speaking: 24 - Writing: 27)

GRE: Sum: 318 (Quantitative: 168 - Verbal: 150 - Writing: 4)

Persian Native

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## Interests

- Rubik Cubes
- Digital Art and Drawing
- Swimming (Certified Lifeguard)
- Camping