

Mohammad Amin Baqershahi

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Education

B.Sc., in Computer Engineering, University of Tehran

Sep 2018 – Sep 2022

The University of Tehran is the first-rank university in Iran according to U.S. News.

Tehran, Iran

- Total GPA: 18.32/20 (3.86/4)

- Ranked 6th among 99 Computer Engineering students
- Related courses: Computer Networks (18.8/20), Introduction to Distributed Computing (19.5/20), Parallel Computing (18.7/20), Internet Engineering (19.3/20), Algorithms Design (19.4/20), Software Engineering (18.4/20), Advanced Programming (18.8/20), Artificial Intelligence (19.5/20)
- BSc. Final Project (Thesis)
 - Proposed a new method for data collection in wireless sensor networks using multiple mobile sinks.
 - Supervisor: Prof. Naser Yazdani

Diploma, Mathematics and Physics, Mofid Highschool

Sep 2017 – Jun 2018

- GPA: 19.92/20

Tehran, Iran

Research Interests

- Distributed Systems
- Cloud Computing
- Software Systems
- Software Engineering
- Internet of Things
- Machine Learning

Research Experience

Research Intern, Monash University

Jun 2022 – present

Melbourne, Australia

- Supervisor: Prof. Adel Nadjaran Toosi
- Proposed an advanced context-aware Kubernetes scheduler for heterogeneous clusters.
- A paper is under preparation.

Research Assistant, University of Tehran

Feb 2022 – Sep 2022

University of Tehran

- Supervisor: Prof. Naser Yazdani
- Proposed a new method for data dissemination in wireless sensor networks using multiple mobile sinks.

Honors and Awards

Recognized as an exceptional talent and offered exam-free admission to the M.Sc. program at the University of Tehran

Jun 2022

Ranked 6th among 99 computer engineering students, University of Tehran

May 2022

Received scholarship from the Supporter Foundation of the University of Tehran

Aug 2018

Ranked 171st (regional) in Mathematics and Physics Konkour (Iran's National University Entrance Exam) among more than 144000 candidates

Jul 2018

Work Experience

Software Engineer, Software Engineer Intern, Snapp! Company

Sep 2021 – Sep 2022

Tehran, Iran

Snapp is the pioneer provider of ride-hailing mobile solutions in Iran.

- Contributed to the development of location-based services.
- Developed a service for calculating the actual driven distance of rides.
- Studied Map Matching, Routing, and Geofencing algorithms.
- Tools: Go, Docker, Kubernetes, OKD, Microservice Architecture, Linux, gRPC

Software Engineer, Software Engineer Intern, Mahsan Company

Jun 2020 – Sep 2021

Tehran, Iran

Mahsan is one of the most important and active companies in computer networks.

- Carried out research on DPI (Deep Packet Inspection) and developed SSL/TLS tools.
- Carried out research on TLS 1.3.
- Tools: C, C++, Bash, OpenSSL, Botan, Wireshark, Jenkins.

Volunteer Experience

Supervisor of ACM Summer Camp 2021 Web Development Course

Jun 2021 – Sep 2021

- Evaluated and selected applicants and course mentors.
- Participated in the supervision of project development and technical guidance.

Member of the University of Tehran ACM Student Chapter

Sep 2020 – Sep 2021

Notable Projects

Distributed Peer-to-Peer File Sharing System , Distributed Computing Course, University of Tehran

- Developed a distributed peer-to-peer file sharing system that enables nodes to communicate over Wi-Fi or Bluetooth and used write-ahead logging (WAL) to provide fault tolerance.
- Tools: python

Khatkesh, Driver Actual Driven Distance Calculator, Snapp! Company

- Developed a service for calculation of the actual distance that the car drove using GPS data.
- Tools: Go, Cassandra, Docker, Kubernetes, Prometheus

Bolbolestan Web Application , Internet Engineering Course, University of Tehran

- Developed a course selection and schedule manager web application named Bolbolestan.
- Tools: Java, React.js, MySQL, JWT, Kubernetes, Docker

DLP (Data Leakage Prevention), Mahsan Company

- Contributed to the development of deep packet inspection tools which extract required data from SSL/TLS packets to be used in preventing data leakages.
- Tools: c++, c

Diagnosing COVID-19 and Pneumonia using Neural Networks , Artificial Intelligence Course, University of Tehran

- Developed a neural network to diagnose COVID-19 and Pneumonia using CT scans.
- Tools: Python, Tensorflow, Keras

Clothes Classifier

- Developed a clothes classifier based on feed forward neural networks
- Tools: Python, Numpy

XV6 Operating Systems Modification , Operating Systems Course, University of Tehran

- Modified xv6 operating system by adding features such as new keyboard shortcuts for the console, new system calls, new CPU scheduling methods, and synchronization using barriers and reentrant mutex locks.

Sophia Compiler , Compiler and Programming Languages Course, University of Tehran

- Developed a complete compiler for an object-oriented programming language named Sophia.
- Tools: Java

Teaching Assistantship

Computer Networks (Instructor: Prof. Naser Yazdani)

Spring 2022

Internet Engineering (instructor: Prof. Ehsan Khamespanah)

Spring 2022

Operating Systems (Instructor: Prof. Mehdi Kargahi)

Fall 2022, 2021, Spring 2021

Compiler and Programming Languages Design (Instructor: Prof. Fatemeh Ghassemi)

Fall 2021

Computer Architecture (Instructor: Prof. Saeed Safari)

Spring 2021, Fall 2021

Computer Architecture Lab (Instructor: Prof. Saeed Safari)

Fall 2021

Data Structures and Algorithms (Instructor: Prof. Hesham Faili)

Fall 2020, Spring 2021

Languages

Persian (Native) | English (TOEFL iBT Score: 106/120 [R: 28, L: 29, S: 22, W: 27] (Oct. 2022))

Skills

Programming Languages (Go, Python, C/C++, Java, SQL, Javascript, HTML, CSS, Verilog HDL),

Tools and Technologies (Docker, Kubernetes, OKD, gRPC, Git, Prometheus, Grafana, Jaeger, Figma),

Frameworks and Libraries (Spring, JQuery, React.js, OpenCV, OpenSSL, Botan, GnuTLS, Antlr4, Modelsim),

Databases (Cassandra, MySQL, PostgreSQL, MongoDB, Neo4j, Redis), **Operating Systems** (Linux, Windows)