Mohammad Amin Baqershahi

✉ m.baqershahi@gmail.com 📞 +989106859847 in Linkedin ⦿ Github ≣ Stackoverflow ⭐ Website

Education

B.Sc., in Computer Engineering, *University of Tehran* ⧉   Sep 2018 – present
University of Tehran is the first rank university in Iran according to U.S. News ⧉ .   Tehran, Iran
- **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), Database Design (19.27/20), Artificial Intelligence (19.5/20)
- BSc. Final Project (Thesis)
  - New method for data dissemination in wireless sensor networks using multiple mobile
  - Supervisor: Prof. Naser Yazdani ⧉

Diploma, Mathematics and Physics, *Mofid Highschool*   Sep 2017 – Jun 2018
- **GPA: 19.92/20**   Tehran, Iran

Research Interests

- Distributed Systems
- Computer Networks
- Cloud Computing
- Parallel Computing
- Internet of Things
- Network Security
- Software Engineering

Research Experience

Research Intern, *Monash University* ⧉   Jun 2022 – present
- Supervisor: Prof. Adel Nadjaran Toosi ⧉   Melbourne, Australia
- Proposed an advanced context-aware Kubernetes scheduler for heterogeneous clusters.
- The result will be a paper which is under preparation.

Research Assistant, *University of Tehran* ⧉   Feb 2022 – present
- Supervisor: Prof. Naser Yazdani ⧉   University of Tehran
- Proposed a new method for data dissemination in wireless sensor networks using multiple mobile sinks.
- The result will be a paper which is under preparation.

Work Experience

Software Engineer, *Snapp! Company* ⧉   Sep 2021 – present
Snapp is the pioneer provider of ride-hailing mobile solutions in Iran.   Tehran, Iran
- Contributed in Developing location-based services
- Developed a service for calculating the actual driven distance of rides.
- Study and development of Map Matching, Routing, and Geofencing algorithms
- Tools and Technologies: Go, Docker, Kubernetes, Cassandra, MongoDB, gRPC, OKD, Microservice Architecture, OSM, Geojson, Shapely, Linux, Bash

Software Engineer, Software Engineer Intern, *Mahsan Company* ⧉   Jun 2020 – Sep 2021
Mahsan is one of the most important and active companies in computer networks and   Tehran, Iran
security.
- Researched on DPI (Deep Packet Inspection) and developed inspections of SSL/TLS protocols
- Researched on TLS 1.3 inspecton
- Tools and Technologies: 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.
- Designed main project (with Spring framework for the backend and React.js for the frontend).
- Contributed in supervision of project development and technical guidance.

Member of the University of Tehran ACM Student Chapter   Sep 2020 – Sep 2021

Honors and Awards

Recognized as Exceptional Talent and Offered Direct Admission to Master Program at the University of Tehran, *University of Tehran*   Nov 2021

Ranked 6th among 99 Computer Engineering students, *University of Tehran*   May 2021

Received scholarship from the Supporter Foundation of the University of Tehran   Aug 2018

Ranked 171th (regional) in Mathematics and Physics Konkour (Iran's National University Entrance Exam) among more than 144000 candidates   Jul 2018

Teaching Assistantship

Computer Networks (Instructor: Prof. Naser Yazdani ⬚ , Semesters: Spring 2022)

Internet Engineering (instructor: Prof. Ehsan Khamespanah ⬚ , Semesters: Spring 2022)

Operating Systems (Instructor: Prof. Mehdi Kargahi ⬚ , Semesters: Fall 2021, Spring 2022)

Compiler and Programming Languages Design (Instructor: Prof. Fatemeh Ghassemi ⬚, Semesters: Fall 2021)

Computer Architecture (Instructor: Prof. Saeed Safari ⬚, Semesters: Spring 2021, Fall 2021)

Computer Architecture Lab (Instructor: Prof. Saeed Safari ⬚, Semesters: Fall 2021)

Data Structures and Algorithms (Instructor: Prof. Hesham Faili ⬚, Semesters: Fall 2020, Spring 2021)

Notable Projects

Khatkesh, Driver Actual Driven Distance Calculator, *Snapp! Company* ⬚
- Developed a service for calculation of the actual distance that the car drove between specified origin and destination by getting its GPS data.
- Tools: Go, Cassandra, Kubernetes, Prometheus

DLP, Data Leakage Prevention, *Mahsan Company* ⬚
- Contributed in development of deep packet inspection tools which extract required data from SSL/TLS packets to be used in preventing data leakages.
- Tools: c++, c

Bolbolestan Web Application, *Internet Engineering Course, University of Tehran* ⬚
- Developed a course selection web application named Bolbolestan that students can use to select their intended courses and also see their schedules.
- Tools: Java, React.js, MySQL, JWT, Kubernetes, Docker

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.

ARM Processor, *Computer Architecture Lab, University of Tehran* ⬚
- Developed a 32-bit ARM Processor With Hazard Detection, Forwarding Unit, SRAM & A 2-Way Set-Associative Cache.
- Tools: Verilog, Modelsim

Sophia Compiler, *Compiler and Programming Languages Course, University of Tehran* ⬚
- Developed a complete compiler for an object-oriented programming language named Sophia.
- Tools: Java

Languages

Persian (Native) | **English** (TOEFL iBT exam will be taken on October 19th, 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)