MOHAMMADAMIN KARBASFORUSHAN

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EDUCATION

9/2016 - Present **SHARIF UNIVERSITY OF TECHNOLOGY** Tehran, Iran
Pursuing B.S. in Computer Science
- GPA: 3.7/4.0
- Coursework: Computer Networks, Data and Network Security, Distributed Systems and Blockchains, Operating Systems, Bioinformatics, Image Processing
- Member of the Sharif Green Society, advocating for environmental protection
- Organized seminars in the scientific chapter of the Mathematics and Computer Science department

9/2012 - 6/2016 **NATIONAL ORGANIZATION FOR DEVELOPMENT OF EXCEPTIONAL TALENTS** Tehran, Iran
Allameh Helli 5 High School
- GPA: 4.0/4.0
- Diploma In Mathematics And Physics
- Scored 99.6 percentile in 2016 nationwide university entrance exam in Mathematics & Physics
- Scored 99.8 percentile in 2016 nationwide university entrance exam in Foreign Language Studies

EXPERIENCE

8/2020 - Present **MAX PLANCK INSTITUTE FOR INFORMATICS** Saarbrücken, Germany
Internet Measurements Research Intern
- Collaborated with Dr. Oliver Gasser in Prof. Anja Feldmann's research group
- Investigated the impact of changes in TLS certificate lifetime requirements enforced by user-agents
- Designed a pipeline to collect and stay up to date with Certificate Transparency Logs' data
- Analyzed 11B records from all available Certificate Transparency Logs
- Accumulated 5 billion TLS certificates for further active measurements

7/2018 - Present **SOTOON (CAFEBAZAAR CLOUD)** Tehran, Iran
Data Infrastructure Engineer
- Built the platform to transfer, store, and analyze big data at petabyte scale for multiple user-facing apps with 79M+ active users across Android, iOS, and web
- Researched and provided strategic recommendations for solutions architecture including Apache Druid for OLAP and Presto for SQL on Hadoop
- Set up and/or maintained Apache {Druid, Kafka, Hadoop, Spark, Zeppelin, ZooKeeper} and M3DB clusters/services; Designed currently running probers and high-accuracy billing systems for them
- Scaled the storage cluster from 10s of terabytes to petabytes (100x)
- Developed Kubernetes operators to manage Apache {Kafka, Hadoop, ZooKeeper} clusters in a Platform as a Service environment
- Created mentorship documents and mentored new team members
- Increased team productivity and efficiency by coordinating work processes

2/2018 - 9/2019 **GOJESABZ BIG DATA** Tehran, Iran
Machine Learning Engineer
- Collaborated with Dr. Shahin Rouhani and a team of students from Sharif University of Technology
- Built a deep learning-based Farsi text Object Character Recognition (OCR) pipeline
- Developed convolutional and long short-term memory neural networks for image classification, super-resolution, and OCR

7/2017 - 9/2017 **SAHAB PARDAZ** Tehran, Iran
Data Engineering Intern
- Developed a distributed and highly available web search engine indexing millions of websites
- Set up, maintained, and wrote a document index/fetch wrapper for ElasticSearch

SELECTED PROJECTS

Fall 2019	**Buffer Overflow, Format String, XSS, SQL Injection, and ARP Poisoning Attack Implementation** *Data and Network Security*

Fall 2019   **Buffer Overflow, Format String, XSS, SQL Injection, and ARP Poisoning Attack Implementation**
Data and Network Security

Spring 2019   **DHCP, UDP Hole Punching, and BGP Implementation**
Data Transfer and Computer Networks

Spring 2019   **Gene Expression, Gene Ontology, and Pathway Analysis with R**
Introductory BioInformatics

Spring 2019   **Blockchain/Cryptocurrency Analysis Platform**
Data Engineering

Fall 2018   **Crowdfunding Ethereum Smart Contract**
Foundations of Blockchain Technology and Cryptocurrencies

Spring 2018   **Checkers AI with Minimax and AlphaBeta Pruning**
Analysis of Algorithms

Fall 2017   **CPU Design With Verilog and Quartus**
Principles of Computer Systems

Fall 2017   **TicTacToe with AI adversary in MIPS assembly**
Principles of Computer Systems

SELECTED COURSES

20.0/20.0   Data Transfer and Computer Networks

20.0/20.0   Data Engineering

19.0/20.0   Advanced Programming

18.7/20.0   Principles of Computer Systems

18.5/20.0   Fundamentals of Computers and Programming

18.0/20.0   Data and Network Security

17.8/20.0   Database Systems

17.6/20.0   Introductory BioInformatics

17.2/20.0   Principles of Image Processing

16.6/20.0   Foundations of Blockchain Technology and Cryptocurrencies (Graduate Course)

ADDITIONAL INFORMATION

TEST SCORES
- **TOEFL iBT** score: 115 (Reading 30, Listening 30, Speaking 28, Writing 27)
- **GRE General Test** score: Quant 169, Verbal 155, Writing 4.0

TECHNICAL SKILLS
- **Proficient in** Docker, Kubernetes, Apache {Druid, Hadoop, Kafka, Zeppelin, ZooKeeper}, HashiCorp Nomad, GoLang, Python, GNU/Linux, Git, LaTeX
- **Experienced with** Apache Spark, Java, Scala, HashiCorp Vagrant, Prometheus, M3DB, PostgreSQL, Google {Docs, Sheets, Slides}

LANGUAGES
- Fluent in English; Native speaker of Farsi

INTERESTS
- **Research Interests include:** Distributed Computing, Cloud Computing, Operating Systems, File Systems, Computer Networks, Security
- **General Interests include:** Mountain Biking, Dancing, Mental Health Awareness, Gender Equality, Environmental Protection, Distributed and Scalable Software, Cloud-Native Software, Electronic Gadgets