

Mohammadamin Karbasforushan

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EDUCATION

Sharif University of Technology, Tehran, Iran

Sep 2016 — Present

- Pursuing BS in Computer Science; To be conferred June 2021. Current GPA – 3.3 / 4.0
- Coursework includes Computer Networks, Data and Network Security, Distributed Systems and Blockchains, Operating Systems, BioInformatics, Image Processing.
- Organized seminars in Hamband, the scientific chapter of the Mathematics and Computer Science department
- Member of the Sharif Green Society, advocating for environmental protection

National Organization for Development of Exceptional Talents (NODET), Tehran, Iran

Allameh Helli 5 High School

Sep 2012 — Jun 2016

- Ranked in the top 0.4% of participants in 2016 nationwide university entrance exam in Mathematics & Physics
- Ranked in the top 0.2% of participants in 2016 nationwide university entrance exam in Foreign Language Studies
- Diploma In Mathematics And Physics; GPA – 4.0 / 4.0

EXPERIENCE

Internet Measurements Research Intern, Max Planck Institute for Informatics, Saarbrücken, Germany

Supervised by Dr. Oliver Gasser, in Prof. Anja Feldmann's research group

Aug 2020 — Present

- 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 data from all available Certificate Transparency Logs
- Accumulated 5 billion TLS certificates

Data Infrastructure Engineer, Sotoon (Cafe Bazaar Cloud), Tehran, Iran

Jul 2018 — Present

- Provided the platform to transfer, store, and analyze big data at petabyte scale for multiple user-facing apps with 40M+ active users; For example an Android app store.
- Researched, compared, documented, and selected solutions for multiple requirements. Eg. Apache Druid for OLAP, Presto for SQL on Hadoop
- Set up and/or maintained Apache {Druid, Kafka, Hadoop, Spark, Zeppelin, ZooKeeper} and M3DB clusters/services
- Scaled the storage cluster from 10s of terabytes to petabytes (100×)
- Designed currently running probes and high-accuracy billing systems for the aforementioned systems
- Developed Kubernetes operators to manage Apache {Kafka, Hadoop, ZooKeeper} clusters in a Platform as a Service environment
- Mentored newly added junior members
- Coordinated our team's work process

Data Engineering Intern, Sahab Pardaz, Tehran, Iran

Jul 2017 — Sep 2017

- Developed a web search engine
- Set up, maintained, and wrote a document index/fetch wrapper for ElasticSearch

SELECTED COURSE PROJECTS

Buffer Overflow, Format String, XSS, SQL Injection, and ARP Poisoning Attack Implementation

(Data and Network Security)

Fall 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)

Spring 2019

Crowdfunding Ethereum Smart Contract

(Foundations of Blockchain Technology and Cryptocurrencies)

Fall 2018

Checkers AI with Minimax and Alpha-Beta Pruning

(Analysis of Algorithms)

Spring 2018

CPU Design With Verilog and Quartus

(Principles of Computer Systems)

Fall 2017

Tic-Tac-Toe with AI adversary in MIPS assembly

(Principles of Computer Systems)

Fall 2017

SELECTED COURSES	Data Transfer and Computer Networks	20.0 / 20.0
	Data Engineering	20.0 / 20.0
	Advanced Programming	19.0 / 20.0
	Principles of Computer Systems	18.7 / 20.0
	Fundamentals of Computers and Programming	18.5 / 20.0
	Data and Network Security	18.0 / 20.0
	Database Systems	17.8 / 20.0
	Introductory BioInformatics	17.6 / 20.0
	Principles of Image Processing	17.2 / 20.0
	Foundations of Blockchain Technology and Cryptocurrencies (Graduate Course)	16.6 / 20.0
ADDITIONAL INFORMATION	RESEARCH INTERESTS	
	• Systems Engineering – Distributed Systems, Computer Networks, Operating Systems, Security	
	SKILLS	
	• Proficient in Docker, Kubernetes, Apache {Druid, Hadoop, Kafka, Zeppelin, ZooKeeper}, HashiCorp Nomad, GNU/Linux, Git, GoLang, Python, L ^A T _E X	
	• Experienced with Apache Spark, Java, Scala, Hashicorp Vagrant, Prometheus, M3DB, PostgreSQL	
	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	
	LANGUAGES	
	• Fluent in English; Native speaker of Farsi	
	INTERESTS	
	• Mountain Biking, Dancing, Cooking, Rock Music, Electronic Gadgets, Distributed and Scalable Software, Cloud Native Software, Computer Gaming, Gender Equality	
	CONFERENCE ATTENDANCE	
	• CT Days 2020 (on Certificate Transparency)	
	• ACM IMC 2020	