Mohammadamin Karbasforushan

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EDUCATION

Sharif University of Technology, Tehran, Iran

- Bachelor of Computer Science   Sep 2016 – Present
  - Current GPA: 3.25 / 4.00

Allameh Helli 5 High School, Tehran, Iran
Affiliated with the National Organization for Development of Exceptional Talents (NODET)

- Diploma In Mathematics And Physics   Sep 2012 – Jun 2016
  - GPA: 4.00 / 4.00

RESEARCH EXPERIENCE

Max Planck Institute for Informatics, Saarbrücken, Germany

- Internet Measurements Research Intern   Aug 2020 – Present
  Supervised by Dr. Oliver Gasser
  - Looking into the impact of changes in TLS certificate lifespan requirements enforced by user-agents
  - Wrote and set up a pipeline to gather, store, and stay up to date with Certificate Transparency logs' data
  - Gathered and stored data from multiple (all available at the time) Certificate Transparency Logs

WORK EXPERIENCE

Cafe Bazaar, Tehran, Iran

- Data Infrastructure Engineer   Jul 2018 – Present
  Our team provides others in the company the platform to transfer, store, and dig into their big data.
  - Set up and maintained an Apache Druid Cluster
  - Maintained an Apache Kafka cluster
  - Maintained an Apache Hadoop (HDFS/YARN) cluster
  - Providing Apache Spark and Apache Zeppelin services
  - Developing Kubernetes operators to manage Apache Kafka, Hadoop, and ZooKeeper clusters
  - Programmed in GoLang, Python, and Java
  - Was in charge of Process Coordination (similar to Scrum Master)

Sahab Pardaz, Tehran, Iran

- Data Engineering Intern   Jul 2017 – Sep 2017
  - Set up and maintained an ElasticSearch cluster
  - Programmed in Java
  - Developed a web search engine

HONORS & AWARDS

- Ranked **399th** among more than **162,000** participants in nationwide university entrance exam for BCs in Mathematics & Physics   2016

SELECTED COURSE PROJECTS

Buffer Overflow, Format String, XSS, SQL Injection, and ARP Poisoning Attack Implementation (Data and Network Security)

- Implemented attacks: Aleph One's Stack Smash, Return To LibC, CrossSiteScripting, In-Band/Blind SQL Injection, and ARP Poisoning to do a Man-In-The-Middle attack

DHCP, UDP Hole Punching, and BGP Implementation (Data Transfer and Computer Networks)

- Implemented protocols TCP, DHCP, and BGP; Implemented NAT traversal via UDP Hole Punching

Crowdfunding Smart Contract (Foundations of Blockchain Technology and Cryptocurrencies)

- Implemented a crowdfunding smart contract against the Etherium blockchain

Gene Expression, Gene Ontology, and Pathway Analysis (Introductory BioInformatics)

- Analyzed the GSE48558 Dataset of AML patient samples vs. healthy samples for gene expressions, ontology, and pathways (using R)

Blockchain/Cryptocurrency Analysis Platform (Data Engineering)

- Designed and implemented a data pipeline to gather and analyze data about blockchains/cryptocurrencies

CPU Design (Principles of Computer Systems)

- Designed a single cycle CPU with Verilog and Quartus

SELECTED COURSE PROJECTS CONTD.	**Assembly Programming** (Principles of Computer Systems)

- Implemented the game Tic-Tac-Toe with an AI adversary in MIPS assembly

Checkers AI (Analysis of Algorithms)

- Implemented an AI for Checkers with Minimax and Alpha-Beta Pruning

SKILLS **Experienced with** Docker, Kubernetes, Apache {Kafka, Hadoop, Druid, ZooKeeper, Zeppelin}, HashiCorp {Nomad, Vagrant}, GoLang, Python, Java, GNU/Linux, Git, and LaTeX

LANGUAGES

Farsi: Native
English: Fluent - TOEFL score: 115 / 120

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

VOLUNTEER ADMINISTRATIVE WORK

Member of the Sharif Green Society, advocating for environmental protection

Helped with seminars in Hamband, the scientific chapter of Mathematics and Computer Science department at Sharif University of Technology

INTERESTS Mountain Biking, Dancing