Kianoush Arshi

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Education

University of Tehran Tehran
B.Sc. in Computer Engineering 2019–2024
Cumulative GPA: 18.53/20.00

Skills

Programming: Python, Go, Solidity, C, C++, Java, Bash, Javascript

Technologies: Blockchains, Smart Contracts, Zero Knowledge Proofs

Tools and Frameworks: Foundry, gnark, Slither, Spring, Maven

Languages: English(Fluent, **IELTS score 8**), Persian(Native)

Experience

Hong Kong University of Science and Technology Hong Kong
Research Intern Summer 2023-Fall 2023

- Working on Zero Knowledge Proof

University of Tehran Iran
Research Assistant Spring 2022-Spring 2023

- A Comparative Analysis of MEV Transactions Pre- and Post-Ethereum Merge Fall 2022-Winter 2023
  - Designed an MEV transaction classifier
  - Analysed arbitrage and liquidation transactions before and after the merge
- Monero Miner Detector Spring 2022
  - Developed a Monero Miner Classifier for network packets
  - Attempted to optimize the detector by filtering out network packets based on their frequency

Teaching Assistant Fall 2020-Now

- Formal Languages and Automata Theory - Dr. Hojjat Fall 2021-Spring 2023
- Artificial Intelligence - Dr. Yaghoubzadeh, Dr. Fadaei Fall 2022-Spring 2023
- Engineering Probability and Statistics - Dr. Bahrak Fall 2022
- Compiler Design and Programming Languages - Dr. Ghassemi Spring 2022
- Advanced Programming - Dr. Khosravi Fall 2021-Spring 2022
- Introduction to Computing Systems and Programming - Dr. Moradi Fall 2020 and Fall 2021

Divar Iran
Full-stack Web Developer Summer 2021

- Developed a platform with many different applications
- Utilized several software developing tools and frameworks including Docker, Celery, Django, etc...

Notable Projects

MEV Inspector — Python
Implemented an MEV transaction classifier on Ethereum:

- Utilized multiprocessing and async programming to maximize performance.
- Applied exploratory data analysis on the collected data.

Bitcoin Protocol and Mechanisms — Crypto Currency Course
Two projects: Python

- Evaluated the consensus protocol of Bitcoin using probabalistic analyses.
- Implemented Bitcoin address generation, transaction mechanisms, and mining.

Oak — Internet Engineering Course
Implemented a project similar to Amazon marketplace — C++

Smart Pot — Cyber Physical Systems Course
Implemented an automated plant irrigation manager — C++

Distributed Sentence Formatter — Distributed Systems Course
Implemented a distributed sentence formatter using Golang. — Go

Data Platform — Divar Internship
A feature-rich data platform implemented in Django. — Python

New features for xv6 OS — OS Course
Added new features including new system calls, scheduling systems, hotkeys, etc. — C

TCP Server — Computer Networks Course
An implementation of a TCP server with congestion controls and sliding window. — C++

Image Classifier — AI Course
Two neural networks projects: Python

- Implemented a feed-forward neural network from scratch.
- Developed an animal classifier using Tensorflow.

CMM Compiler — Compiler Course
A compiler for a new functional Language called CMM. The project had four phases: Java, ANTLR, Jasmin

- Grammar specification
- Name Analysis
- Type Analysis
- ByteCode Generation

Certificates

Programming with Google Go — Coursera
Instructed by Ian Harris (Irvine) — Winter 2023

Blockchain — Coursera
Instructed by Bina Ramamurthy (Buffalo) — Winter 2023

Decentralized Finance (DeFi): The Future of Finance — Coursera
Instructed by Cam Harvey (Duke) — Summer 2022