Amir Ali Vahidi Noghani

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Education

Sep 2020 - present Bachelor's Degree at **University of Tehran** (GPA: 3.67/4.0)

Sep 2017 - June 2020 High School Diploma in Mathematics at **Shahid Hashemi Nezhad 1(National Organization for Development of Exceptional Talents)** (GPA: 19.41/20)

Research Interests

- Computer Networks
- Distributed Systems
- Internet of Things

Courses

Data Structures and Algorithms	18.4/20
Artificial Intelligence	18/20
Operating System	17/20
Algorithm Design	18.5/20
Computer Networks	17.1/20

Work Experience

Intern - Hamrahe-Aval (Mobile Communication Company of Iran, MCI) Summer 2023

As an intern at Hamrahe-Aval, I had the privilege of gaining valuable insights into the dynamic realm of mobile communications, particularly focusing on GSM technologies with a foundational understanding of 3G and 4G. My primary focus within the company was on Intrusion Detection Systems (IDS).

Projects

XV6-Modified Link to Project

A group project written in c and c++.This project is a modified xv6 operating system with several extra features. xv6 is a re-implementation of Dennis Ritchie's and Ken Thompson's Unix Version 6 (v6).

Transaction in Bitcoin Testnet Network Using Python Link to Project

This project involves generating a dedicated testnet Bitcoin address and crafting transactions using 'python-bitcoinlib' and a testnet faucet. It includes creating single-input, dual-output transactions with a P2PKH script, executing a multisig script transaction with three addresses, and exploring a more complex transaction scenario. The project concludes by mining a block on the testnet network, showcasing practical expertise in Bitcoin testnet operations, including address generation, transaction crafting, multisig scripting, and testnet mining.

Congestion Control Mechanisms Simulation in Computer Networks Link to Project

Designed, executed, and analyzed simulations for TCP Reno, New Reno, and BBR congestion control algorithms in computer networks. Collected and compared performance metrics, such as throughput and latency, under diverse network conditions. The project showcased my expertise in optimizing network performance and data-driven decision-making.

Teaching Assistance Experience

Introduction to Computing Systems and Programming — University of Tehran
Under Supervision of Dr.Hashemi and Dr.Moradi — Oct 2022 - Present

Advanced Programming — University of Tehran
Under Supervision of Dr.Ramtin Khosravi — Sep 2023 - Present

Computer Networks — University of Tehran
Under Supervision of Dr.Khonsari — Sep 2023 - Present

Skills

Programming	Proficient: Python, C/C++. Intermediate: SQL,Verilog
Tools and Technologies	Git (Version control system), Docker, ZMQ, Jupyter Notebook, VS Code, Makefile, Familiar with Redis and Kafka
Paradigms	Relational Database Systems, html & css
Operating Systems	Linux (Debian-Based), Microsoft Windows

Honors & Awards

2020	Ranked 140th in Iran's National University Entrance Exam (among top 0.1 percent of participants)
June 2023 - Present	Chief Elected Official of Computer Engineering Student Association of Tehran University (also known as Student Branch of ACM) (visit ut-acm.ir for more info)

Volunteering & Leadership

During the summer of 2023, I had the honor of leading the 'Summer of Code' summer internship program at t

In the post-summer semester of 2023, successfully organized a welcoming event for new students in the Electri

Organized a computer game competition, featuring the popular game 'Counter-Strike,' within the Computer a

In December 2023, orchestrated and executed an Intercollegiate Programming Contest (ICPC) at the Universi

Cultivated collaborative relationships with leading technology companies, securing their valuable sponsorship f

Languages

English
Persian Native

Hobbies

Volleyball (Member of computer engineering team of University of Tehran)
Podcasts
Computer Games