Zahra **Yazdani Tazeh Kand**

COMPUTER ENGINEERING · BSc STUDENT

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Education

University of Tehran *Tehran, Iran*
B.Sc. IN COMPUTER ENGINEERING *Sept. 2018 - PRESENT*
- GPA: 17.46/20 (3.66/4.0)

Roshangar High School *Tehran, Iran*
DIPLOMA OF PHYSICS AND MATHEMATICS *2014 - 2018*
- GPA: 19.93/20

Research Interests

Computer Networks   Information and Communications Technologies for Development (ICTD)   HCI   Security and Privacy

Publications

Tenzin Samten Ukyab, Zhihong Luo, Silvery Fu, Demetrius Davis, Zahra Yazdani, Shaddi Hasan, Hannaneh Barahouei Pasandi, Sylvia Ratnasamy, Scott Shenker. **"Making Cellular Networks More Efficient By Roaming In-Place"** – in preparation

Teaching Experiences

University of Tehran *Tehran, Iran*
UNDERGRADUATE TEACHING ASSISTANT IN FORMAL LANGUAGES AND AUTOMATA *Sept. 2021 - Jan. 2022*
- Designed two assignments and grading.

UNDERGRADUATE TEACHING ASSISTANT IN ADVANCED PROGRAMMING *Feb. 2020 - Jan. 2022*
- Responsible for proposing the initial idea, designing, and implementing projects as a group of TAs and in-person or online evaluation and grading sessions.
- Assigned to total number of twelve projects in four semesters.

Research Experiences

Virginia Polytechnic Institute and State University, SPIN Lab *Blacksburg, VA, USA*
UNDERGRADUATE RESEARCH ASSISTANT *July 2021 - PRESENT*
- **Under the Supervision of Dr. Shaddi Hasan**
- **Feb. 2022 - present** Currently working on a project called "AvA". The ultimate goal of AvA is to provide more stable and better performing cellular connections in future cellular networks.
- **July 2021 - Jan. 2022** Designed tools for collecting data on California power outages for evaluating wildfire's impacts on mobile network resilience in future works. The system enables us to capture near-real-time outage data from the two largest electric utilities in the state.

Coursework

Introduction to Computing Systems and Programming (18.25) **Advanced Programming** (20) **Differential Equations** (19)

Engineering Probability and Statistics (17) **Data Structures** (19.7) **Computer Architecture** (20) **Algorithm Design** (16.9)

Operating System (17.5) **Compiler design and programming languages** (18) **Systems Analysis and Design** (18.5)

Artificial Intelligence (19) **Computer Networks** (17.3) **Database Design** (17.1) **Software Engineering** (18.4)

Introduction to Software Testing (18.8) **Internet Engineering** (17.7)

Honors & Awards

| 2018 | **Ranked among the top 0.9% of students**, Iranian University Entrance Exam | *Tehran, Iran* |

Notable Course Projects

2022	**Android Auto,** Launching an open-source version of android auto called "openauto" and adding features such as fixing memory leakage, and making it minimal with required features.	*C++*
2022	**Surface Scanner,** Building an android application to scan a surface using phone's sensors such as accelerometer and gyroscope.	*Java*
2022	**IEMDB,** Implementing a movie web application from scratch using Spring Framework (for backend), JavaScript(React for frontend), MySQL, Docker, and Kubernetes.	*Java*
2021	**Project Management,** Planning different aspects of a system for tracking students' requests, such as time management using Gantt chart, risk management, and cost managements, also planning it using Agile methods.	
2021	**OAuth,** Implementing OAuth for a web application.	*Python*
2021	**Testing Methods,** Implementing different testing methodologies such as Junit, test doubles, graph-based testing, logic-based testing, and UI testing.	*Java*
2021	**Image Classification,** Designing and implementing a neural network for image classification using Keras and TensorFlow.	*Python*
2021	**Price Prediction Using Advanced Regression Techniques,** Implementing a price prediction system for cars using models such as KNN, Decision Tree, and random forest.	*Python*
2021	**Network Routing,** Implementing a virtual network routing protocol among connected nodes using Distance Vector Multicast Routing Protocol (DVMRP).	*C++*
2021	**Network Switch,** Implementing a layer two network switch sharing data between different systems using Ethernet frames and Spanning Tree algorithm.	*C++*
2021	**FTP Server,** Implementing a FTP server sharing data with a client using socket programming.	*C++*
2021	**XV6,** Working with the XV6 kernel and adding some features such as system calls, different scheduling, user programs, and synchronization.	*C*
2020	**Sophia Compiler,** Designing and implementing a compiler for a language called "Sophia" given the language documentations from scratch.	*Java, ANTLR4*
2020	**MIPS Processor,** Implementing MIPS Processor in three phases: single-cycle, single-cycle with pipeline, and multi-cycle.	*VerilogHDL*
2019	**Netflix,** Implementing a simple form of Netflix with a basic recommender system using object oriented programming and creating a simple web application version of it.	*C++, HTML*

Skills

Programming	Python, C, C++, Java, VerilogHDL, HTML, CSS, SQL Familiar with Assembly, LaTeX
Technologies	Git, Maven, Makefile
Web Development	React, Spring, TomCat
Machine Learning	Pandas, NumPy, Scikit-learn, Matplotlib, TensorFlow, Keras
Frameworks	JUnit, Docker Familiar with Kubernetes
Hardware Simulators	Familiar with ModelSim, Quartus
Software Engineering	Object-oriented Programming, Software Testing Methodologies, Agile, Scrum
Operating Systems	MacOS, Linux
Other	Android Development
Languages	Persian: Native proficiency English: Professional working proficiency - TOEFL Score: 108/120 (Advanced) Arabic: Elementary proficiency