

Zahra Yazdani

COMPUTER SCIENCE · PHD STUDENT

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Education

Georgia Institute of Technology

PH.D. IN COMPUTER SCIENCE

- Advised by Alberto Dainotti and Cecilia Testart

Atlanta, GA, USA

Aug. 2023 - PRESENT

University of Tehran

B.SC. IN COMPUTER ENGINEERING

- GPA: 17.63/20 (3.68/4.0)

Tehran, Iran

Sept. 2018 - Feb. 2023

Research Interests

Computer Networks Internet Measurements Network Security BGP Security Internet Outage Detection

Publications

Mostafa Meimand, Vanshaj Khattar, Zahra Yazdani, Farrokh Jazizadeh, Ming Jin. **"TUNEOPT: An Evolutionary Model-based Reinforcement Learning Controller For Tuning Energy-Comfort Optimization Formulations"** – Published - ACM BuildSys'23

Research Experiences

Georgia Institute of Technology

GRADUATE RESEARCH ASSISTANT

- **Researcher in the Internet Intelligence Research Lab**

- **Under the Supervision of Prof. Cecilia Testart and Prof. Alberto Dainotti** Analyzing BGP misconfigurations using Global Routing Intelligence Platform (GRIP) data.

- **Under the Supervision of Prof. Paul Pearce** Checking for potential security issues in a network after an internet outage resulting from a power failure.

Atlanta, GA, USA

Aug. 2023 - PRESENT

Virginia Polytechnic Institute and State University, SPIN Lab

UNDERGRADUATE RESEARCH ASSISTANT

- **Under the Supervision of Prof. Shaddi Hasan**

- **Feb. 2022 - May 2023** Worked 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.

Blacksburg, VA, USA

July 2021 - May 2023

Teaching Experiences

University of Tehran

UNDERGRADUATE TEACHING ASSISTANT IN **FORMAL LANGUAGES AND AUTOMATA**

- Designed two assignments and grading.

Tehran, Iran

Sept. 2021 - Jan. 2022

UNDERGRADUATE TEACHING ASSISTANT IN **ADVANCED PROGRAMMING**

- 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.

Feb. 2020 - Jan. 2022

Honors & Awards

2023 **Georgia Institute of Technology President's Fellowship**, Additional stipend of \$5,500 per academic year offered to a select number of highly qualified doctoral students across the nation.

Atlanta, GA, USA

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, JavaScript, VerilogHDL, HTML, CSS, SQL, \LaTeX , P4 Familiar with Assembly
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 Persian: Native proficiency
Languages	English: Full professional proficiency - TOEFL Score: 108/120 (Advanced) Arabic: Elementary proficiency