Permanent Address:
792 Winterberry Dr.
Fredericksburg, VA 22405

Rafid Mirza

rm2jgk@virginia.edu | 540-750-9416
www.linkedin.com/in/rafid-mirza

Current Address:
Bond House 612B
Charlottesville, VA 22904

Education

University of Virginia, School of Engineering, Charlottesville, VA   **Expected May 2024**
Computer Science (BS) - GPA: 3.9/4.0 (Dean's List Fall 2021)
- Relevant course work: Program and Data Representation, Theory of Computation, Advanced Software Development, Computer Architecture, Probability, Linear Algebra, Data Privacy, Data Structures and Algorithms II

Roanoke Valley Governor's School, Roanoke, VA   **August 2016 - May 2020**
Advanced Studies Diploma - GPA: 4.44/4.0 (weighted)
- Relevant course work: Python Coding, Engineering Design, Product Design Engineering, Multivariable Calculus

Experience

High-Performance Low-Power Lab, Charlottesville, VA   **September 2022 - Present**
Undergraduate Research Assistant
- Focusing on project regarding predictive maintenance using computational RFID in Industry
- Leveraging Python to integrate accelerometer with Raspberry PI and applying ML/AI data analysis techniques on collected data to build predictive maintenance software

Department of Computer Science - University of Virginia, Charlottesville, VA   **August 2022 - Present**
Undergraduate Teaching Assistant - CS3330
- Leading lab section for Computer Architecture course with other TAs; answers questions and provides guidance for ~50 students learning basis of computer architecture (caches, memory, x86, etc.)
- Provides additional help and tutoring to students twice a week in Office Hours

SkyIT, Calgary, Alberta   **June 2022 - August 2022**
Backend Engineer Intern
- Developed backend system of REST APIs using Django REST framework through various tasks distributed through Trello in collaboration with other engineers in an agile setting with bi-weekly sprint meetings
- Provided code reviews and approval of merging code on GitHub with two additional engineers
- Researched creation of a Multi-Factor Authentication System from scratch in Django REST and developed corresponding authentication schema leveraging email

Academic Projects

Website to Match Students with Study Partners, Charlottesville, VA   **February 2022 - May 2022**
DevOps Manager
- Guided team in management of tools used in project such as GitHub, GitHub Actions, and Heroku
- Implemented both Google and Mapbox APIs and led development of project login and mapping features

Python Program to Detect Problem Behaviors in Individuals, Roanoke, VA   **August 2019 - January 2020**
Co-Researcher
- Programmed Python to train multiple ML models (such as Random Forest) on texts scraped from text messages
- Built feature where texts compared to normal texts to detect abnormalities and notifications sent to user if so
- Instituted extra feature so alerts sent if abnormalities were detected if above certain threshold

AUV to Assist with Pipeline Spills, Roanoke, VA   **August 2017 - January 2018**
Head Researcher
- Created an underwater vehicle for oil detection in water to assist with ocean cleanup
- Managed the Raspberry Pi (Python) was used to control movement of AUV and read data from sensor; for example, the pH sensor data was decoded into python for data analysis

Technical Skills

- Languages/Tools: Java, C/C++, Python, JavaScript, HTML, CSS, Django, Django REST, React, x86 Assembly, Selenium
- Technical: Heroku, Firebase, SQL/MySQL Workbench, MATLAB, Microsoft Excel, Wireshark, Networks (TCP/IP, Protocols, etc.), Windows, Linux