ZAIN MIRZA

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PROFILE

A committed learner in computer science majoring in data-centric computing, seeking opportunities in data science and engineering to apply my knowledge and gain professional experience.

EDUCATION

Virginia Polytechnic Institute and State University

Senior, Expected Graduation Date – May 2023

Coursework:

- Data Analytics and Visualization
  - Studied the process of interactive data science
  - Python programming with Scikit-learn, Numpy, Matplotlib, and Pandas
- Intermediate Data Structures and Algorithms
  - A performance-oriented study of advanced data structures especially types of trees, sorts, and list-based structures
- Computer Organization
  - A thorough study of MIPS architecture, including hands-on projects involving writing assembly code and
- Methods of Regression Analysis
  - Utilized R to conduct simple and multiple regressions and model fitting pertaining to the data science process
- Probability and Statistics for Engineers
  - Foundational statistics concepts including multiple regression, ANOVA, and covariance

SKILLS

- Data Engineering in Python on DataCamp
- *AWS Cloud Practitioner Essentials* Certified
- Learn SQL Course on Codeacademy
- Java, HTML, Python, Scikit-learn, Numpy, Pandas, R, C, Git

PROJECTS

- Developed a Java implementation of a GIS indexing system using a point-region quadtree, hash table, and a bespoke heap and buffer pool

- Designed a MIPS assembler in C
- Conducted statistical regression analysis report on degree to salary correlation

EXPERIENCE

GM AutoDrive Challenge

Ongoing

- A team autonomous vehicle competition, where I am developing the vehicle controls and interface on a Chevy Bolt EUV. I will utilize real time simulators and bench testing in advance of in person testing at the University of Michigan in Ann Arbor. Development will occur in Robot Operating System (ROS)

CenturyLink Cyber Security Internship – DevOps Analyst
July – August 2018

- Supported development of CenturyLink's Security Log Monitoring (SLM) product, which offers sophisticated log ingestion, monitoring and event correlation, with a powerful data analysis engine
- Developed parsers to identify suspicious network traffic for CenturyLink SLM customers

A-List Empire – Software Engineering Intern
April 2018 – January 2019

- Created graph-based teaching software that utilizes artificial intelligence to give students custom feedback on how to improve their understanding of geometry problems
- Developed cybersecurity software to rate the severity of suspicious messages received by partner corporations

HONORS, AWARDS & MEMBERSHIPS
- National Merit Scholarship Commended Student
- Co-President of Astronomy Club
- Officer of National Honor Society
- Member of Computer Science Honor Society
- Member of Mu Alpha Theta (Math Honor Society)
- Member of Association for Computing Machinery (ACM)
- Member of McMatics Club for math tutoring
- Science Olympiad National Tournament, 2015
  - Won individual medal at National Tournament representing state of Virginia with Longfellow Middle School team

SERVICE AND EXTRA-CURRICULAR ACTIVITIES
- Mountain biking leader and volunteer
  - Mountain Bike VP for VT Cycling Club
  - Organized the Fall 2022 Virginia Tech Collegiate Mountain Bike Race Weekend
  - Service Coordinator at Virginia Tech's mountain bike club
  - 1st place in Wolf Bouncer Junior XC Race in Lorton, Va. 9/2017
  - 2nd place at Rowdy Dawg XC Sport Category 9/2020
  - Member of MORE (Mid-Atlantic Off-Road Enthusiasts)
  - Volunteer regularly to build and maintain trails
  - Involved with planning and design of new trails at McDonald Hollow Park and Lake Fairfax Bike Park
  - Mechanic and Sales at A-1 Cycling
- Community Service
  - Volunteer with Habitat for Humanity
  - Volunteer at *The Virginian* Senior Care Center