Omar Elgeoushy

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EDUCATION

Master of Science in Computer Engineering   August 2023 - May 2025

Purdue University, Indianapolis, IN

GPA: 3.43/4.0

Bachelor of Science in Computer Science   Graduated December 2022

Virginia Tech, Blacksburg, VA

GPA: 3.48/4.0 | Mathematics Minor | Cum Laude | Dean's Honor List: Spring 2021, Fall 2021 and Spring 2022

SKILLS AND CERTIFICATES

Programming Skills: Java, Python, C, C++, C#, Ruby, React, JavaScript, Angular, MATLAB, CSS, Spring, SQL, PyTorch, .NET, Swift

Networking Skills: Broadband Network, TCP/IP, PON, SDN, VPN, VLANs, SNMP

Other Skill: Github, Jira, GDB, Valgrind, Linux, Unix, AWS, Data-structure, Scrum, AutoGPT, Agile, Waterfall, AI, Docker

Certificates: AWS Cloud Practitioner (In Progress)

Language Skills: Fluent in English, German, and Arabic

WORK EXPERIENCE

Software Engineering Research Assistant at Purdue, Indianapolis, IN   August 2023 – Present

- Developing a Python-based AI model by employing a dataset of over 2500 images with TensorFlow and DeepLab to facilitate object detection and semantic segmentation within the autonomy stack, a pivotal element for self-driving cars
- Collaborating with a team of 4 to integrate the model into the Multibody Dynamics & Terramechanics (IVRESS) system, advancing autonomous vehicle technology by 25%
- Leveraging Unreal Engine 5 to visualize testing, enhancing the practical application of the technology

Software Engineer Intern at Si-Ware Systems, Menlo Park, CA   June 2023 – September 2023

- Developed a Python-based customer support chatbot using the AutoGPT API, streamlining support processes
- Constructed automated assistance and enhanced communication to deliver a seamless user experience on the front-end with React integration based on custom data fed to the model
- Utilized Pinecone to execute a vector database, improving search and retrieval processes for the chatbot

Software Engineer Intern at 5APlus NetArch, Cheyenne, WY   Summer 2022 and 2021

Network Monitoring Dashboard: June 2022 – August 2022

- Created a Python-based network monitoring dashboard using SNMP and TCP/IP to analyze data from network devices
- Implemented Angular and CSS for a user-friendly network performance monitoring interface
- Designed a MySQL database to store and analyze network data for easy retrieval

Finance App: June 2021 – August 2021

- Contributed to the development of the Finance app, enabling payment processing using cryptocurrency for users
- Collaborated with the development team to implement and test features for the app
- Focused on backend development using Springboot and applied SQL to manage and manipulate the database

Undergrad Teacher Assistant (UTA) | Computer Science Department at Virginia Tech   August 2022 – December 2022

- Assisted over 300 students in achieving success in a CS course by providing tutoring and additional support

PROJECTS

Case Study Library: August 2022 – December 2022

- Led a team of 4 in designing and developing a website hosted on AWS to serve as a resource for CS students at Virginia Tech, utilizing various AWS tools including S3 and DynamoDB
- Developed a user-friendly interface enabling students to easily upload and retrieve presentations
- Senior project website featuring over 850 presentations, accessible at https://casestudies.cs.vt.edu/