Alan Munirji

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EDUCATION

Masters in Software Engineering — Carnegie Mellon University August 2022 - December 2023
- Overall GPA: 3.87/4
- Applied Distributed Systems - Grade Received: A
- Introduction to Computer Security - Grade Received: A

Bachelor of Science in Computer Science — University of Pittsburgh September 2015 - December 2019
- Overall GPA: 3.50/4
- Double Major (Computer Science & Pre-Medicine)
- Introduction to Systems Software - Grade Received: A+
- Introduction to Operating Systems - Grade Received: A+
- Computer Organization and Assembly Language - Grade Received: A

PROFESSIONAL EXPERIENCE

Full Stack Software Developer at Troutwood — Pittsburgh, PA August 2023 - Ongoing
- Architected an LLM (Large Language Model) app to serve as a chatbot that helps users navigate their financial journey
- Researched, analyzed, and evaluated various prompt engineering methods for optimizing and tailoring LLMs for a start up's specific business needs
- Implemented chosen prompt engineering methods to aid large language model in factual recall in the financial domain, financial Q&A, navigation of Troutwood's app features/tools, and user tailored guidance pertaining to their specific financial situation and plan

Graduate Software Engineer Intern at The Aerospace Corporation — Chantilly, VA May 2023 - August 2023
- Elicited requirements from stakeholders to create a Java and C++ command line parser tool to take data from an aerospace firm and convert it to desired formats as a k8s deployed microservice
- Created a dashboard PWA in React and TypeScript to visualize cubesat and other satellite info for engineers and scientists, consuming from various APIs in the process and working with SQL data
- Studied Swagger/OpenAPI and wrote a guide with a sample project to teach other engineers how to effectively use it for API auto-documentation and code stub generation, as well as the many other powers of declaring an API from a specification

Junior Software Developer at D'Angelo Technologies — Beavercreek, OH February 2021 - July 2022
- Employed as a full stack developer for software built on vehicle simulator for a government client, typically in C#, C++, Python, and JavaScript, but also in R and Swift
- Managed tasks in Kanban board, work efforts via scrum framework, and Bitbucket with git for project coordination/maintenance
- Displayed initiative by developing and maintaining project solo, self-assigning work by priority while leadership were at capacity with other projects
- Evaluated various solutions for speech to text and text to speech functionality, then implemented solutions for both into project, working with Docker, Microsoft's Universal Windows Platform, and various speech to text libraries
- Scripted and trained a neural regression network in Python (PyTorch) to aid in auto-piloting ships in a ship simulator
- Architected and developed from scratch both a prototype WinForms and a product WPF app to serve as a hub app for project's software suite
- Implemented a database in NoSQL using MongoDB (C++, Compass), and messaging between services using ActiveMQ (C++, C#) to act as a learning record store and to support a replay system in simulator with more features than *Super Smash Bros. Ultimate*'s replay system

Research Assistant in Robin E. C. Lee's Lab — Pittsburgh, PA May 2019 - August 2019
- Developed software as a lone programmer in a wet lab environment for one of the lab's ongoing projects, working in C++, Java, and Python (pandas, NumPy)
- Architected an Android app from ground up to interface with microcontroller in Java over a Bluetooth network

PROJECTS

3D Interactive Portfolio 2021 – Present
- Created a 3D portfolio with three.js, viewable on personal website. Showcases personal technological efforts and projects in different worlds belonging to a celestial system in a miniature universe
- Written with HTML/CSS using a minimal css framework called pico css

AutoSage 2021
- Created a Python app for users of BeatSage, an AI driven service made for popular VR rhythm game Beat Saber
- Simplifies and automates BeatSage usage for any songs a user wishes to play in Beat Saber
- Updated to be packaged into a Windows executable leveraging PyInstaller for a better user experience, features a UI built with Tkinter for ease of use

What Song Is That? Twitter Bot 2020

- Designed, developed, and self-hosted a twitter bot for both the fun and learning experience on own Raspberry Pi (Raspian GNU/Linux 10) server, for a friend's twitter account
- Takes requests from users who wish to know what song is playing in a tweet, queries Shazam's API on user's behalf and displays its findings on a static website created just for it. It has fielded over two thousand song requests so far

RECENT TECHNOLOGIES I'VE WORKED WITH

Windows, Python, Golang, Docker, TypeScript, JavaScript, Linux, HTML, CSS, Java, Unity, C#, React, SQL, MongoDB, NoSQL, C, three.js, Swagger OpenAPI, AWS, Kubernetes