Austin Choe

Cell 443-328-5319 | achoe@umd.edu | Portfolio

EDUCATION

University of Maryland 2020 - 2024
Bachelor's of Science in Computer Science *College Park, MD*

TECHNICAL SKILLS

Hard Skills: Object Oriented Programming, Full Stack Development, Mobile Development, Cloud Computing, Algorithms, Data Structures, Parallel Programming, Software Automation
Languages: Python, Java, JavaScript, TypeScript, Kotlin, HTML, CSS, C, C++, C#, Ruby
Software Skills: OpenMPI/MP, Node.js, SQLite, MySQL, MongoDB, Angular, AWS, React, Jetpack, .NET
Environments: VS Code, Android Studio, Eclipse

EXPERIENCES

Software Engineer | *Westminster, MD | Sept. 2019 – March 2020* ASPIRE Robotics
- Developed and integrated Java software on a Raspberry Pi for real-time robot control in a competitive robotics tournament, conducting extensive testing and optimization, to maximize robot efficiency
- Configured an Xbox controller for precise movements, mapping inputs to specific actions adapter for drivers and mechanics for optimal performance
- Demonstrated technical and strategic proficiency in robot design and operation, leading to high-scoring performances in the tournament

Fridge-Tab | *Kotlin, Java, XML*
- Collaborated with a team of three software engineers to implement an application that allows the user to track supply and maintenance of groceries and ingredients to their own customization
- Focused on human-computer interaction and user-friendly UI, brainstorming scenarios to accommodate user needs and desires
- Implemented features allowing users to create, check-off ingredients, and walk through recipes efficiently

Color Segmentation using Gaussian Models | *Python*
- Leveraged machine learning techniques, including Gaussian Mixture Model (GMM) and Singular Gaussian Model (SGM), to train and optimize the model for accurate image analysis and subject identification
- Overcame challenges with computational cost and handling images with multiple similar subjects, improving the model's performance and reliability through parameter experimentation and noise reduction techniques using OpenCV

Audio Stream Manager Console Application | *C#, .NET*
- Created a application that integrates the console as user interface and allows the user to manually modify the audio mixer and manage playback and recording devices via I/O streams
- Used dependencies like .NET SDK, C#, and an open sourced API and namespace called Audio-Mixer
- Achieved user desired multi-way streamlined audio sourced output for Windows OS 10

AccuScraper | *Python*
- Implemented a software automation data extractor for the renown weather service AccuWeather
- Analyzed HTML from web pages of thousands of cities and parses data to a *.csv* file
- Web scraped using techniques of Regular Expressions, *requests*, BeautifulSoup, and FastAPI

Conway's Game Of Life | *C*
- Developed 2D Cellular Automation through Parallel Computation and concurrent processing
- Partitioned grid and workload by ranks that communicate together to maximize efficiency
- Analyzed performance and iso-efficiency, optimizing overload and scalability to its serial program