Alex Parisi

· Software Engineer ·

NYC Metropolitan Area

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Work Experience

Mikucare

Woodbridge, NJ / Hybrid

DSP Software Engineer | C++, Python, Matlab, SQL *Mar. 2022 - Present*

- Member of a team of engineers responsible for developing and maintaining the device firmware of a smart baby monitor: scheduling releases, ensuring proper version control and documentation, and participating in code reviews
- Leading the design and maintenance of the motion detection algorithm to improve the image features of the monitor's camera - tuning and simulation are done using Python and MATLAB, and the iterations of the algorithm are integrated into the production firmware in C++
- Responsible for performing statistical analyses on large sets of data to ensure proper device function and algorithm deployment, as well interpreting trends in complex datasets to lead the development of new algorithms and customer-facing features.

Peraton Labs

Picatinny Arsenal, NJ / Hybrid

Software Engineer | C++, Python, Matlab *Nov. 2019 - Mar. 2022*

- Member of a team of engineers responsible for developing and maintaining the real-time object tracking and trajectory estimation software for a Counter-Unmanned-Aircraft-System (C-UAS) program at the US Army CCDC-AC: Weapons and Software Engineering Center in C++.
- Participated in technical discussions, verified software pipelines, and analyzed ballistic radar trajectories and adaptive filter performance for C-UAS programs and performed algorithmic analyses for a Kinetic-Energy (KE) defeat project in Python.

Crestron Electronics

Rockleigh, NJ

Firmware Engineer | C, Matlab *Jan. 2018 - Nov. 2019*

- Wrote and interacted with bare-metal and Real-Time-Operating-System (RTOS) C firmware, specifically relating to audio processing algorithms like line/acoustic echo cancellation, delay-and-sum beamformers, and fixed/adaptive filter design.
- Modeled algorithms and product design feasibility in MATLAB, and participated in the full cycle of product development for the UC-SB1-CAM soundbar, one of Crestron's best-selling products.

Education

Georgia Institute of Technology, M.S.

Atlanta, GA

Electrical and Computer Engineering - GPA: 3.7 *2016 - 2017*

Manhattan College, B.S.

Bronx, NY

Computer Engineering, Minor in Mathematics - GPA: 3.6 *2012 - 2016*

Projects & Patents

3D Renderer using OpenGL and GLFW

C++, OpenGL, GLFW

- Designed and implemented a renderer for 3D models using OpenGL, featuring Blinn-Phong lighting, shadow mapping, and model importing.

Personal Website Deployed with Django

Python, Django, JavaScript

- Deployed my personal website using the Django web framework with page information dynamically pulled from an SQLite database.

Patent: Adaptive beamforming microphone metadata transmission

US20210074311A1

- Adaptive beamforming microphone metadata transmission to coordinate acoustic echo cancellation in an audio-conferencing system

Skills

Programming	Python, C++, MATLAB, C, JavaScript, HTML & CSS, Markdown, SQL, Unix, Bash, AWS
Software & Packages	Tensorflow/Keras, PyTorch, numpy, scipy, pandas, matplotlib, git, Latex
General	Firmware Integration, Statistic Analysis, Low-Latency Code, Multi-Threaded Systems, C++ STL