

Alex Parisi

· SOFTWARE ENGINEER ·
NYC Metropolitan Area

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Work Experience

Mikucare

Woodbridge, NJ / Hybrid

DSP Software Engineer | C++, Python, SQL

Mar. 2022 - Present

- Member of a team of engineers responsible for developing high throughput and low latency C++17 code for a smart baby monitor.
- Leading the development of new algorithm features utilizing sensor fusion and computer vision techniques, as well as designing scalable backend software frameworks for mathematical analysis in a fast-paced startup environment.
- Responsible for performing statistical analyses on large sets of data using Python to ensure proper device function and algorithm deployment for 30,000+ users, as well interpreting trends in complex datasets hosted on AWS.
- Collaborating with other engineers, product managers, and stakeholders to understand requirements and deliver cutting-edge, high-quality software solutions utilizing software best practices and an Agile methodology.

Peraton Labs

Picatinny Arsenal, NJ / Hybrid

Software Engineer | C++, Python, Matlab

Nov. 2019 - Mar. 2022

- Member of an Agile 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++17.
- Collaborated with large teams composed of industry experts to deliver high-performance and high-throughput software running on a custom Linux kernel, which interacts with several other systems and a proprietary weapons platform.

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 fast and scalable renderer for 3D models with OpenGL, using GLFW for window management, CMake for build configuration, and the OpenGL Mathematics library (GLM) for vector math and matrix transformations.

Personal Website Deployed with Django

Python, Django, JavaScript, Fullstack

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

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

- (US10854216B2) Patent on using the geometrical metadata of individually beamformed microphones to coordinate a multi-channel adaptive echo canceller (AEC) 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