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 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