Alex T. Parisi
(914)-261-7433 https://www.aparisi.org alex.parisi@outlook.com

Relevant Experience

DSP Engineer
Crestron Electronics
Rockleigh, NJ
Jan 2018 - present

Research Role: Determining feasibility of product design via MATLAB simulations. Modeling various algorithms in MATLAB such as (normalized) least mean squares filters, multi-delay block frequency-domain adaptive filters, and delay-and-sum beamformers. Pending provisional patent relating to the interaction between acoustic echo cancelers and beamformers.

Development Role: Writing/interacting with bare-metal and RTOS firmware, specifically relating to audio processing algorithms and real-time audio loops. Extensive exposure to line/acoustic echo cancellation algorithms and fixed and adaptive filter design. Familiarity with I2C and I2S communication protocols. Strong involvement in the design, testing, and certification of Crestron's UC Smart Soundbar. Currently involved in the development of the DSP firmware for the DMPS4, the successor to Crestron's well-known DMPS3 Presentation System.

Evaluation Role: Expert at analyzing performance of third-party audio algorithms, especially acoustic echo cancellation, beamforming, and noise reduction algorithms - both subjectively and objectively. Active role in the OEM/ODM process for audio products at Crestron to facilitate a fast-paced development cycle.

Verification Role: Debugging existing audio products and tuning audio processing algorithms in a laboratory environment. Experienced at analyzing filter coefficients to optimize performance. Planning, automating, and executing electrical and acoustic tests on audio products. Heavy exposure to Microsoft's "Skype for Business Audio Test Specification v3/v4" certification process.

DSP Engineer - Intern
Crestron Electronics
Rockleigh, NJ
May 2017 - Aug 2017

Led an 8-person collaborative cross-functional team of interns that designed and introduced a new speaker product for huddle-type conference spaces that uses beamforming techniques to produce a narrow sound field for targeted acoustic environments; researched new technology and topics of interest for the implementation of Crestron DSP systems.

Education

Georgia Institute of Technology, '17

M.S. in Electrical and Computer Engineering
Concentration: Digital Signal Processing

Manhattan College, '16

B.S. in Computer Engineering
Minor: Mathematics

Skills

Programming Skills

MATLAB, C, C#, JavaScript, LaTeX, Python, and C++. Familiarity with Verilog, MIPS Assembly, and HTML.

Software Skills

MATLAB/GNU Octave, Eclipse-based IDE's, AUTOCAD, SIMPL Windows, Crestron Toolbox, Avia Audio DSP Tool, WinISD, Microsoft Office products.

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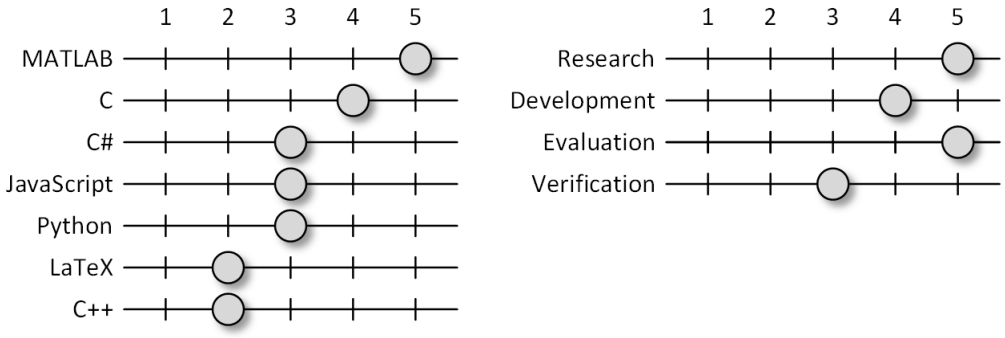
Skills, cont.

Proficiency



Equipment Skills

Audiomatica CLIO, Audio Precision APx555, Listen AmpConnect ISC, HEAD Acoustics labCORE/ACQUA 4.1, standard oscilloscopes and electronics equipment.

Personal Skills

Strong work ethic; excellent verbal and written communication skills; highly adaptable team player; ability to conceptualize and execute planned, sustainable initiatives.

Interests and Academic Research

Undergraduate Research

– Optimizing Brain Tumor Images using the Otsu Algorithm
– Free-Space Optical Data Transmission

Graduate Research

– Phased Vocoder Design and Implementation
– Electroencephalographic Beamforming Analysis and Optimization via Eye-Blink Artifact Removal
– Identity Detection via Handwriting Analysis using the Curvelet Transform
– Heteronymous Ambiguity Resolution for Text-to-Speech Synthesis

Interests

Loudspeaker enclosure design, passive audio crossover circuit design, woodworking and wood finishing, home automation, 3D printing, and percussion/bass guitar.