Alex T. Parisi

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PROFESSIONAL SUMMARY:

Knowledgeable and highly motivated engineer with 4 years of experience and an M.S. in Electrical Engineering from Georgia Tech. Fully COVID Vaccinated with booster.

WORK HISTORY:

Electrical Engineer, Peraton Labs (Nov 2019 – Present):

- Modeled/analyzed performance of radar schedulers and tuned/implemented Kalman filters.
- Participated in technical discussions, verified software pipeline, and analyzed ballistic radar trajectories and adaptive filter performance for counter UAS programs.
- Led the data analysis for a live-fire test event of a counter UAS program and participated in the analysis of several concurrent live-fire test events of counter UAS programs.
- Participated in high-level technical discussions and performed algorithmic analysis for a KE defeat project.

DSP Engineer, Crestron Electronics (Jan 2018 – Nov 2019):

- Modeled algorithms and determined feasibility of product design via MATLAB simulations.
- Wrote and interacted with bare-metal and RTOS firmware, specifically relating to audio processing algorithms like line/acoustic echo cancellation, delay-and-sum beamformers, and fixed/adaptive filter design.
- Debugged I2C and I2S communication protocols on circuits boards using standard oscilloscopes.
- Heavy involvement in the design, testing, and certification of Crestron's UC Smart Soundbar.

PATENTS:

U.S. 10,854,216: Adaptive beamforming microphone metadata transmission to coordinate acoustic echo cancellation in an audio-conferencing system

SKILLS:

Programming:

- Python, MATLAB, C, C++, C#, JavaScript.
- Tensorflow/Keras, Numpy, Scipy, Pandas, matplotlib
- Git version control and python package deployment with pip

Software:

- PyCharm, Jupyter/Google Colab, MATLAB and GNU Octave, Simulink, Spyder, Eclipse, AutoCAD, and Microsoft Office products.

Equipment:

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

EDUCATION:

Georgia Institute of Technology, 2017
M.S. in Electrical and Computer Engineering,
Concentration in Digital Signal Processing

Manhattan College, 2016
B.S. in Computer Engineering, Minor in Mathematics

PROJECTS:

- Chessboard evaluation using a deep convolutional neural network (CNN)
- Poetry generation using a recursive neural network (RNN)
- Face generation using a progressively growing generative adversarial network (ProGAN)

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