Bridget Tan

Recent engineering graduate seeking full-time signal processing & programming positions

240-370-4493
bridgett@andrew.cmu.edu
bridgettan.me
github.com/bridget-tan
linkedin.com/in/bridget-tan

Education

Carnegie Mellon University, Pittsburgh, PA
3.54/4.33 GPA December 2020
Master of Electrical and Computer Engineering

Carnegie Mellon University, Pittsburgh, PA
3.31/4.00 GPA May 2019
Bachelor of Electrical and Computer Engineering
Minor in Audio Engineering

Skills

Programming:
Advanced - MATLAB, Python, C
Intermediate - LaTeX, HTML, CSS
Basic – C++, C#, JavaScript, PyTorch

Software:
Git, Bash, Unity, Solidworks, Audacity, Fritzing, KiCad, Photoshop, Pro Tools, Microsoft Office, G Suite

Hardware:
Arduino, Raspberry Pi

Operating System:
Windows, macOS, Linux

Fabrication:
3D Printing, Laser Cutting

Spoken Languages:
English (fluent)
Mandarin Chinese (fluent)

Relevant Courses

Graduate Coursework:
Advanced Digital Signal Processing
Machine Learning for Signal Processing
Gadgets, Sensors and Activity Recognition in HCI
Computer Vision
Introduction to Machine Learning
Image and Video Processing
Introduction to Computer Music
Speech Recognition and Understanding

Undergraduate Coursework:
Electroacoustics
Mechatronic Design
Speech Processing
Fundamentals of Signal Processing
Introduction to Embedded Systems
Introduction to Probability Theory
Signals and Systems

Projects

Fast Fractal Image Compression, Carnegie Mellon University Fall 2020
- Implemented, with a team of 4, an SVD fractal image compression technique with faster performance than baseline and comparable results to modern compression techniques

Smart LED Face Mask, Carnegie Mellon University December 2020
- Constructed an LED face mask controlled by a microcontroller, voice volume, motion, and light to display user's facial expressions in different colors

8x8 LED Rhythm Game, Carnegie Mellon University October 2020
- Built an Arduino gaming machine with an LED matrix controlled by registers and button interactions to play a short rhythm game to audio

Nyquist Chiptune (8-Bit) Effect, Carnegie Mellon University Fall 2019
- Created an effect library using the programming language Nyquist, oscillators, and digital filters to convert audio to 8-bit-style sound

Universal Phone Language Identification, Carnegie Mellon University Fall 2019
- Collaborated with two partners to design a Python language identification system with over 85% accuracy for English, German, and Mandarin Chinese speech through comparison of monophones and biphones

Research Experience

Infant Language and Learning Lab, Carnegie Mellon University
Research Assistant June 2019 – July 2019
- Developed a pipeline to analyze correlation in fNIRS data by utilizing the AnalyzIR Toolbox in MATLAB

Infant Language and Learning Lab, Carnegie Mellon University
Research Assistant May 2017 – September 2018
- Designed and programmed, in a team of six, video games in Unity promoting cognitive engagement and physical activity to enhance cognitive control and school readiness skills in prekindergarten children

Work Experience

Open Learning Initiative, Carnegie Mellon University
Assistant Course Developer (Remote) June 2019 – Present
- Ensured quality and developed engaging course workbooks and texts for online courses

AB Tech, Carnegie Mellon University
Student Technician October 2015 – December 2020
- Directed over 30 students and restructured organization to improve workflow and transparency
- Led recruitment and trainings to teach members technical production skills
- Managed logistics and coordinated event plans with clients and vendors while staying on budget
- Provided audio, lighting, rigging, and production management for hundreds of successful events every year