***Ryan Burke*** *233 Ayrshire Farm Ln Apt 103, Stanford, CA 94305; (502) 649-6915;* [*rburke2@stanford.edu*](mailto:rburke2@stanford.edu)

**Education:** Stanford University

Master's in Electrical Engineering

GPA: 3.3 / 4.0

* Graduating in April

Bradley University,

Bachelor’s Degree in Electrical Engineering

**Relevant**

**Courses:**

* Percep Audio Coding
* Real-time DSP Lab
* DSP
* Audio App of the FFT
* Fourier Trans & App
* DT Signals & Sys
* CT Signals & Sys
* Sim & Analysis for EE
* Machine Learning
* AI: Principle & Technique
* Convex Opt I
* Intro to Lin Dyn Sys
* Intro to Stat Sig Proc
* Comp Img & Disp
* Digital Img Proc
* Design Seminar I & II
* Sr Capstone Proj I & II
* Interfacing Lab

**Work**

**Experience:**

Bose Corp. – DSP Algorithms Engineer (June 2016 – September 2016)

Performed exploratory research into the Android platform

Conducted in-depth analysis of existing code structure for improved system design

Bose Corp. – DSP Engineer (May 2014 – August 2014)

Researched and developed a polyphase filterbank for adaptive mic mixing.

Implemented versatile DF2T and DF1 filterbanks in CSR

Created and implemented a new method of loading coefficients from select areas of flash

Cummins Inc. – Summer Controls Intern (May 2013 – August 2013)

Developed an automated testing script that cut testing time down by 95%

Generated variable values to enable successful component operation

Assisted in final testing of current product software release

Assembled and troubleshot updated components for next current product software release

**Skills:** Programming Languages:

Experienced in MATLAB, Python, C, C++, JavaScript, Haskell, Assembly, & VHDL

Programming Studios:

Proficient with Code Composer Studio, MATLAB, Simulink, Visual Studio, Atmel, & Xilinx

Communication:

Fluent in Spanish Language

**Design**

**Projects:**

* Developed an algorithm for inpainting on images with depth information
* Created a perceptual audio codec with impulse detection for varying window length
* Programmed a polyphase filterbank for mp3 encoding in assembly
* Designed a navigation subsystem for an autonomous boat platform
* Designed a polyphase filterbank for mp3 encoding with double precision multiplication in ASM
* Designed a navigation subsystem for an autonomous boat platform
* Designed FIR filters to remove unwanted noise from useful signals
* Designed a system to interface an IR sensor, keypad, LCD screen, distance sensor, and μC
* Designed an FPGA system to read from an ADC, filter the signal, and send it out on a DAC
* Designed several Simulink systems to achieve certain signal encoding methods
* Designed a program to interface a microcontroller, LCD, and tachometer

**Personal:**

Rock climbing:

* Wall Supervisor – Bradley University (August 2013 – May 2015)

Community Service:

* SERVE – Bradley University (August 2013 – May 2015)
* Independent park cleanup (May 2011 – Present)