BENJAMIN YEE

206 Canyon Circle San Luis Obispo, CA 93410-1710 | 626-841-2133 | bhyee@calpoly.edu | benhyee.com

EDUCATION

CAL POLY SAN LUIS OBISPO, SAN LUIS OBISPO, CA Expected Graduation December 2018
B.S. Electrical Engineering | GPA: 3.231

SAN MARINO HIGH SCHOOL, SAN MARINO, CA August 2010 - June 2014

WORK EXPERIENCE

TEXAS INSTRUMENTS INTERN June 2017 – August 2017
- Evaluated the PLLatinum simulator software by comparing LMX25xx board measurements to the simulated values
- Tested PLL EVMs for phase noise, lock time, and spurs with an Agilent E5052A Signal Source Analyzer
- Updated designs for a dual PLL board on Altium to be up to standard with Texas Instrument's CAD requirements

TAIWAN TECH TREK SUMMER INTERN (2ND PLACE) June 2016 – August 2016
- Researched and developed systems that assist surgeons with minimally invasive surgery
- Evaluated ultrasonic, light, magnetic field and temperature sensors as potential distance sensors
- Visualized sensor data using Processing to 3-D model values of the magnetic field sensors

KWA PERFORMANCE INDUSTRIES INC., CITY OF INDUSTRY, CA June 2013 - August 2013
Summer Assistant Technician
- Worked with KWA products to replace damaged chassis and parts with upgraded components

TECHNICAL PROJECTS

OPERATIONAL AMPLIFIER DESIGN March 2017 - June 2017
- Studied the small signal model to analyze gain, resistance, and capacitance of various transistor configurations
- Designed and tested op-amp designs in LTSpice and lab with the goal of simulating ideal op-amp characteristics

QUENCH (STARTUP-WEEKEND HONORABLE MENTION) January 2016 - Present
- Prototyped a hydration accessory that reminds users on their phone and wearable to drink hydrate
- Employs a JSON library to send and receive packets over Bluetooth containing load sensor and accelerometer data

RAT CENTRAL PROCESSING UNIT (CPU) January 2016 - March 2016
- Programmed a CPU in VHDL that decodes assembly code, operates arithmetic functions, and outputs through VGA or leds
- Featured 2 KB of RAM and 18 KB of ROM running at a 2.5 kHz clock cycle
- Wrote Flappy Birds in Assembly Language which was uploaded onto the Basys board for demonstration

POWER SUPPLY September 2014 - December 2014
- Created a power supply with variable voltages between 0 – 20v displayed on seven segment displays
- Learned fundamental technical skills including PCB design with CAD (Diptrace), soldering, crimping, and heat shrink
- Introduced to the manufacturing process of etching, stripping, and developing PCBs

EARPHONE PROJECT October 2014 - Present
- Prototyped earphones that automatically pause when pulled out of the ear and resume when put back into the ear
- Identified that the earphones functionality can be represented with OR gate logic
- Tested different sensors including velostat pressure sensors to sense when the earphones are in the ear

EXTRACURRICULARS

MUSICAL CONNECTIONS, SAN MARINO, CA September 2001 - Present
Founding Member, President, Vice President, Historian & Publicity Chair
- Led a group that brings music to nursing homes and retirement homes throughout Southern California
- Raised funds through benefit concerts to donate 10 pianos to various nursing homes in need of one
- Assisted campers at the Hearts in Harmony Summer Camp. The camp helps to teach music to children with special needs

BOY SCOUTS OF AMERICA September 2001 - Present
Eagle Scout of Honor
- Awarded the Eagle Scout of Honor in 2012. Remains an active member of Troop 358, Rose Bowl District
- Worked on Eagle projects assisting such organizations as the Pasadena Ronald McDonald House, Union Rescue Mission, American Military Museum, and the Boys and Girls Club of LA

SKILLS

Software: Altium, VHDL, Eagle, LTSpice, Processing, Assembly Language, Diptrace, HTML, CSS, Python, PowerPoint, Excel
Hardware: Arduino, Amateur Ham Radio Operator, Soldering, Oscilloscope