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 June 2018
B.S. Electrical Engineering

SAN MARINO HIGH SCHOOL, SAN MARINO, CA August 2010 - June 2014
Activities: Varsity Tennis, Marching Band, and Orchestra

TECHNICAL PROJECTS

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

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

UROV (UNDERWATER REMOTELY OPERATED VEHICLE) September 2014 - June 2014
- Soldered and then applied heat shrink to the wires of the thrusters and camera which controlled movement and vision
- Programmed an Arduino mega to run tests on two, then four motors wired to motor shields
- Qualified to compete in the Marine Advanced Technology Education (MATE) International UROV Competition

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 were in the ear

SUMO BOT September 2014 - October 2014
- Built a sumo wrestling robot that stayed in an arena of black lines while pushing opposing robots out of the ring
- Wrote Arduino code to interpret phototransistor sensor values and to power the motors

WORK EXPERIENCE

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
- Coded an Arduino to process sensor values and print it to the Serial for other software to use
- Visualized Arduino 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

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
- Organized volunteers and raised funds to refurbish fences at the Mandarin Baptist Church of Los Angeles

SKILLS

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