JACOB POOLE

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in jacob-poole
⌂ JacobPoole

Education

University of California, Riverside
Mar. 2020
B.S. Computer Engineering

Summary

Computer engineer with experience in low level electronics and firmware design through Altium Designer and Verilog in Quartus. Looking to transition into a management position in engineering where I have experience leading 4 student organizations (14 total roles) and 2 robotics teams. I'm absolutely passionate about working with people and creating strong communicative bonds between team members.

Skills

C++
Verilog
Python
C
Java
Altium Designer
FPGAs
LTSpice
Microsoft Office

SOFT SKILLS
Project Management
Leadership
Communication
Agile Development
Collaboration
Public Speaking

Employment

Applied Medical
Technology and Development, Electrical Engineer I

Rancho Santa Margarita, CA
July 2020 to Current

- Lead group decisions through data driven proof between mechanical and electrical teams
- Debugged and tested current system to produce our desired output
- Wrote Verilog firmware for Max 10 system checking
- Designed schematics and layouts for a high voltage PCB

Applied Medical
Technology and Development, Electrical Intern

Rancho Santa Margarita, CA
June 2019 to Sept. 2019

- Created schematics and layouts for a high voltage PCB to create plasma using Altium Designer while taking into account signal integrity and interference
- Wrote firmware in Verilog for Intel Cyclone V and Max 10 FPGAs
- Debugged using signal tap and in-system memory features with Quartus
- Certified and tested 30+ components for company use on future PCBAs, chose which parts would be beneficial and reasonable to use

NSF IRES China
Researcher

Beijing, China
June 2018 to Aug. 2018

- Research in semiconductor and microelectronics technology, specifically RRAM
- Become Cleanroom certified to fabricate a 128x8 RRAM array
- Test durability and utility of an RRAM array

Activities

Bourns College of Engineering Leadership Council · President (18-19), Treasurer (17-18)
- Encourage collaboration among the 19 engineering organizations on campus
- Provide base knowledge to help new organizations grow
- Assist with any problem an organization has and needs help with

Institute of Electrical and Electronics Engineers (IEEE) ·
Chair (18-19), Vice Chair (17-18), Program Chair (16-17)
- Manage a board of 18 officers and four large-scale projects
- Delegate tasks throughout the year to help produce events and workshops

Citrus Hack · Director (17-18), Operations Lead (16-17)
- Leading a team of 6 to organize two hackathons for 2017; Citrus Hack(400 people) and Cutie Hack(200 people) www.CitrusHack.com www.CutieHack.io

Projects

Motion Activated Smart Mirror - Senior Design
Mar. 2019 to June 2019
- Managed team members by creating a Github Projects Kanban board with deadlines and progress measurements
- Tracked hand motions using a Kinect and OpenCV to interact with the mirror
- Created a Raspberry Pi 3 environment with Python and PyQT to interface with the user
- Pulled data from Google Calendar, Google Play, and Yahoo Weather to display

Micromouse Project
Sept. 2018 to Dec. 2018
- Created an autonomous, robotic mouse to navigate a maze using IR sensors to sense walls
- Programmed in C an ATMEGA1284 micro controller to run the mouse and external board
- Wrote an algorithm to navigate and track where the mouse was in the maze
- Used HC05 Bluetooth modules to transfer data to another board to display on a 16x16 LED Matrix the maze and mouse location

Remote Controlled Car
Jan. 2017 to Mar. 2017
- ATMEGA1284 controlled, stepper motor driven small car programmed using C
- Utilized joysticks and HC05 Bluetooth modules to control the car from an external board
- Constructed synchronous state machines for each function of the car

Volunteering

FIRST FRC Team 589 & 6960 · Mentor
Current
Crescenta Valley High School, North J.W. High School
- Lead the robotics team to complete a robot in six weeks, attend various outreach events, and mentor many LEGO robotics teams for elementary to middle school students
- Mentors programming in Java/C++ and electronics for the robot