Jesse Jensen

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RELEVANT SKILLS AND EXPERIENCE

Languages: C, C++, Rust, JavaScript, and Python
Tools & Software: KiCad (EEschema, PCBnew), LTSpice, Oscilloscope

Embedded Systems Engineer (Software/Hardware), PocketChange, inc. - Tokyo, Japan

Programming

- Designed, engineered, tested, and produced, with a team of 3, an electronic money top-up kiosk from the ground up including firmware, front-end, and backend development
  Rust core, Flutter/dart frontend
- Improved speed and efficiency of in-production kiosk by rewriting firmware to allow communications to be received on separate channels for quicker routing and DMA functionality
  C++, JavaScript
- Reduced labor cost by engineering a coin-counting machine to automatically sort coins into nationalities including software and circuit design
  Python

Analog and Digital Circuits

- Designed, prototyped, and debugged printed circuit boards (PCB) for a QR-controlled smart fridge
- Devised a Near Field Communication (NFC) circuit to allow smartphones to top-up E-money accounts at kiosks
- Improved circuit of currency exchange kiosk to allow for power to be controlled remotely through software
- Planned, designed, employed, and troubleshooted microcontroller circuits to communicate over I2C, UART, and SPI protocols

PCB Electronics Engineer Intern, Prismview Electronics

- Tested PCBs, power supplies and other hardware using lab instruments including the oscilloscope, multimeter, and function generator
- Created and updated Bill of Materials for new PCB product structures

Computer Engineering student, Utah State University

- Programmed a digital-circuit brick-breaker videogame on an FPGA with VHDL (team of 2)
- Created and carried through the engineering design process an input-corrective drawing tablet for those with disabilities that corrects shaky input and uses machine learning (Tensorflow) to classify text (solo)
- Designed and developed, with a team of 3, a dungeon crawler game in JavaScript without a game engine, implementing advanced algorithms and data structures, such as quad trees and tile rendering, to optimize performance and functionality
- Programmed a robot, in a team of 2, with a port of RTOS OSEK to navigate and race through an obstacle course, receiving 1_{st} place in a class of 37 (team of 2)

EDUCATION

UTAH STATE UNIVERSITY   Logan, UT
B.S., Computer Engineering; Computer Science minor, Mathematics minor   Fall 2018
- Maintained 3.27 GPA while working 25+ hours per week

WORK HISTORY

PocketChange, inc. Tokyo, Japan, 09/19 - present
University Institutional Repository Worker, USU Merrill-Cazier Library, Logan, UT, 08/15 – 12/18
PCB Electronics Engineer Intern, Prismview Electronics, Logan, UT, 02/2017 – 08/2017