Anqi Tao

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Education

University of California, Berkeley, Electrical Engineering and Computer Science

May 2028

- Coursework: Structure of Computer Programs, Linear Algebra, Differential Equations, Multivariable Calculus
- Awards: Regents' and Chancellor's Scholarship (0.1% acceptance)

Projects

Medical Label Reader

- Developed an assistive device for vision-impaired patients by integrating RFID with customizable audio playback logic written in C++, applying circuit design and soldering skills to build a compact prototype.
- Diagnosed Arduino SPI incompatibility and power connection issues using multimeter, incorporating a MicroSD card module, MAX4466 mic, amplifier, and the TMRpcm library to handle audio encoding and decoding.

Sixty-Second Timer

- Designed an MSI timer in Multisim and prototyped it on a Xilinx Spartan-7 FPGA (PLTW S7), using 74LS series TTL gates including J-K flip-flops and counters, and BCD-to-7-segment "add-one" logic for double-digit counting.
- Multiplexed two numeric displays by combining a 1MHz clock signal output by the National Instruments MyDAQ Arbitrary Waveform Generator with a 74LS163 based 4-bit frequency divider for simultaneous output.

Intruder Alert System

- Developed a household intruder alert system using Raspberry Pi 4, ultrasonic distance sensor HC-SR04 with a resistor-based voltage divider, analog sound sensor KY-038, and photoresistors.
- Programmed in Python 3 via TigerVNC virtual monitor to process sensor inputs and activate alert signals.

Epilepsy Seizure Alert Device

- Developed a chest-mounted seizure detection device using a 3-axis accelerometer ADXL335, heart-rate monitor AD8232, vibration sensor, and a tactile button for false alert cancellation.
- Programmed in Arduino IoT (C++) to analyze sensor data and send push notifications to caretaker's device.

Experience

Marketing Intern, Faith and Community Engagement – Los Angeles, CA

Nov 2023 - Jan 2025

- Led design workshops for 10+ interns and collaborated with a team of 6 to create 420+ social media posts on AAPI equity and financial literacy, reaching 32k followers and 1M+ views.
- Supported organizational growth by submitting 5 government grant proposals, managing budgets and equipment for 2 events, and conducted outreach to 200+ non-profit organizations to build partnerships.

Skills

Technologies: NI Multisim, NI ELVISmx, SOLIDWORKS (Certified SOLIDWORKS Professional in Mechanical Design), AutoCAD, Fusion 360, Arduino IDE

Spoken Languages English (Bilingual Proficiency), Mandarin (Native)