Daniel Nguyen

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Skills

Languages: C, C++, Verilog

Experience

Summer Conference Assistant, University of California, Irvine June 2025 – June 2025

- Delivered excellent customer service to 500+ conference guests throughout the summer, answering questions, resolving concerns, and helping create a smooth, welcoming event experience.
- Managed guest records and event schedules using Microsoft SharePoint and Excel, ensuring accurate data and seamless conference operations.

Vice President, Asian Club July 2023 – June 2024

- Created and led a club to foster cultural connection and unity among Asian-American students by organizing monthly events and weekly meetings.
- Partnered with local businesses and community members to coordinate successful fundraisers, collectively raising over $3,000 in a single year.
- Led club members in a week-long school-wide float-building competition, coordinating tasks and teamwork, resulting in a 2nd place finish.

Projects

IR Remote-Controlled Window Blinds

- Engineered and built an automated window blind system using Arduino, integrating IR remote control and motor drivers to enable smooth and precise open/close functionality, improving user convenience and control.
- Programmed a sleep timer by implementing custom timing logic in Arduino code, automating blind operation on a schedule and ensuring reliable performance without manual intervention.
- Created an interactive user interface on an LCD display, allowing users to view system status, adjust settings, and control blind operation, enhancing usability and accessibility.

RISC-V Processor Design in Verilog

- Designed and implemented a single-cycle RISC-V processor in Verilog, developing core instruction execution and control logic to correctly perform arithmetic, load/store, and branch operations.
- Built comprehensive testbenches to simulate processor behavior, identify bugs, and verify correctness of instruction execution, improving system reliability and confidence in design.

Autonomous Rock-Paper-Scissors Robotic Arm

- Designed an autonomous rock-paper-scissors robotic arm, integrating 3D-printed components with TB6560 motor drivers and a RAMPS 1.4 controller for precise stepper motor actuation.
- Developed a randomizer-based decision system and coordinated swinging motion for the robotic arm, allowing it to autonomously select rock, paper, or scissors and perform smooth, realistic gestures, enhancing interactive gameplay and system reliability.

Line-Following and Object Detecting Rover

- Engineered an autonomous line-following rover using Arduino, two IR sensors and a PixyCam for real-time object detection, ensuring accurate navigation and obstacle handling.
- Developed PID control and object detection algorithms, enabling the rover to maintain precise path tracking and autonomously respond to detected objects, improving system reliability.

Education

University of California, Irvine – B.S. in Computer Engineering Anticipated June 2028