Raquel Garcia

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EDUCATION

Texas A&M University - College Station, TX **Grad. 2025**
BS in Electrical Engineering, Minor in Chinese *Program GPA: 3.0*
Honors: President's Endowed Scholarship recipient, National Merit finalist, Hispanic Scholarship Fund scholar

WORK EXPERIENCE

Honeywell FM&T, Kansas City National Security Campus – Kansas City, MO **June 2024 – August 2024**
Electrical Engineering Intern II (Purchase Product Engineer in PCBs)
• Assessed PCB drawings and managed external stakeholders to improve manufacturability of complex circuit designs.
• Collaborated with numerous internal agencies/teams to design, manufacture, and buy critical electrical components.
• Standardized process and documentation of scrapping parts, ensuring audit compliance and saving Product Engineers 48 effort hours annually.
• Automated solder void detection in bottom-terminated components using Matlab to ensure strict IPC compliance.

RELEVANT EXPERIENCE

TURTLE Robotics, Officer - College Station, TX **August 2023 – Present**
Treasurer *September 2024 – Present*
• Coordinating with Mechanical Engineering department to purchase supplies and manage $15,000 budget.
• Supervising payment system for membership dues to maintain timely collection and accurate records.
• Facilitating supply reimbursement process for 11 project teams to improve efficiency within the organization.

Lab Quality Officer *August 2023 – May 2024*
• Managed upgrade of lab equipment following a 3x budget increase, reducing fabrication flowtime by 90%.
• Collaborated closely with project leaders to purchase and allocate resources on $15,000 budget.
• Spearheaded lab cleanliness and organization initiatives, ensuring tidy and efficient lab for all team members.

TURTLE Robotics, Vision-Integrated Robotic Turret Team - College Station, TX **January 2024 – Present**
Team Leader
• Directing team of 11 in development of Xilinx FPGA-driven autonomous turret robot for object tracking and following.
• Prototyping color detection computer vision system in Vitis HLS with C++ to track a designated target.
• Collaborated with teammates to design and fabricate camera chassis and drive base to enable smooth movement in following a target.

TURTLE Robotics, Seed Germination and Growth Team - College Station, TX **January 2023 – May 2024**
Lighting Sub-Team
• Constructed robot to automate lighting, water, and nutrient delivery to grow vegetables in simulated environment.
• Devised Raspberry Pi-controlled LED grow light system, enabling full customization of light cycles.
• Programmed light wavelength and day/night cycle functions in Python, allowing adaptability for different plant species.

Digital System Design - College Station, TX **January 2023 – May 2023**
• Designed and tested circuits and logic gates on breadboards—including ALUs; half, full, and ripple carry adders.
• Developed circuits in SystemVerilog using Xilinx Vivado and analyzed results against test benches—such as a traffic light controller with sensors, combination lock systems, and a 4-bit addition/subtraction calculator.
• Simulated circuits on Xilinx Zynq series FPGA to validate functionality and performance.

SKILLS

Languages: Chinese (conversational), English (native)
Programming languages: Matlab, SystemVerilog, Python , C++
Software: Multisim, Xilinx Vivado, LTspice, CAM350, Microsoft Office (Word, Excel, PowerPoint)
Hardware: Xilinx FPGA, Raspberry Pi, Arduino, oscilloscope, signal generator, multimeter, 3D printer