

# Daniel H Tran

Wylie, TX

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## EDUCATION

**Louisiana State University (LSU), Baton Rouge, LA**

**May 2025**

*Bachelor of Science, Computer Engineering*

Honors: Taylor Opportunity Program for Students (TOPS) Award recipient, GO Grant

**Related Coursework:** Electronic Tools, Intro to PLCs, Controls Engineering

## EXPERIENCE

**Robotics Lab Assistant, LSU, Baton Rouge, LA**

**August 2024 – May 2025**

- Collaborated with a team of undergraduate engineers to develop an autonomous ground robot for the IEEE Region 5 Robotics Competition.
- Assisted in developing ROS 2 Python nodes for obstacle avoidance and motion control
- Created testing plans for valid movement accuracy in simulated and real-world environments.
- Contributed to presentations demonstrating progress throughout the whole project to a panel of engineers.

**Server, Café du Monde, New Orleans, LA**

**May 2022 – August 2022**

- Took customer orders and prepared them with preferences in mind
- Cleaned tables and assisted with other servers when available

## PROJECTS

**Capstone Design Project - OCD Simulation VR Game – “A Day In My Mind”**

- Worked with undergraduates on a VR experience simulating the sensory overload aspects of OCD designed in Unity.
- Developed a Gaussian blur shader using Shader Graph to create a screen-wide visual distraction, adjustable based on player interaction and progress.
- Helped integrate logic to trigger events such as audio effects or objects switching materials.

**Arduino Synthesizer on Arduino**

- Built a basic sound synthesizer using an Arduino microcontroller and components from a starter kit.
- Programmed each button to play a different tone and connected a seven-segment display to show what note is being played.

**Elevator Controller on FPGA**

- Designed and implemented a finite state machine that's based on an elevator controller using Verilog on a Basys 3 FPGA.
- Controller used switch-based inputs and LEDs to display outputs to simulate real-time control logic

## SKILLS

Python, Verilog, ROS2, MIPS, MATLAB, Java, HTML5