

# CHARLES TEJANO

Minneapolis, MN | (612) 497-4255 | [charlestejano@outlook.com](mailto:charlestejano@outlook.com) | [www.linkedin.com/in/charlestejano](http://www.linkedin.com/in/charlestejano) | [github.com/Charlie-Tejano](https://github.com/Charlie-Tejano)

## SUMMARY

- Rising Junior in Electrical Engineering with a focus on Embedded Systems and Instrumentation. Hands-on experience building Arduino prototypes, collecting sensor data, and documenting test results with Excel. Known for safe, procedure-driven work and attention to detail; available for full-time/weekend shift.

## EDUCATION

### **University of St. Thomas**

B.S., Electrical Engineering

Minor - Business Administration

St. Paul, MN

Expected – May, 2028

### **Anoka-Ramsey Community College**

A.A., Liberal Arts

Coon Rapids, MN

Conferred – August, 2025

- **Relevant Coursework**—C/C++ fundamentals, Calculus I-II, Physics II, Differential Equations + Linear Algebra, Multivariable Calculus, Digital Logic
- **Courses in progress**—Circuits I, Discrete Structures, Microprocessor Applications

## TECHNICAL SKILLS & CERTIFICATIONS

**Programming:** C/C++, Python, VHDL, HTML/CSS, JavaScript

**Tools:** Arduino microcontrollers, oscilloscope (phase shift/amplitude measurements), digital multimeter (basic measurement - ohms/volts)

**Lab/Testing:** Data logging, test documentation, basic instrumentation, safety compliance

**Certifications:** Bilingual Seal (Spanish) – Minnesota Dept. of Education (verified via Avant)

## ENGINEERING PROJECTS

### Student Profile Hub | HTML/CSS/JavaScript

January, 2026

- Building a responsive website to showcase engineering projects and document builds, by developing reusable HTML/CSS components and implementing mobile-first layouts.
- Repeatedly review and refine HTML and JavaScript code—5+ iterations to guarantee the structural integrity and aesthetic design meeting all expectations.

### Water Quality Monitor | Arduino/C++

December, 2025 – In Progress

- Building an Arduino-based water quality monitor that classifies turbidity as Clear/Cloudy/Unsafe, by integrating an analog turbidity probe + LCD and calibrating threshold ranges from sample readings.
- Improved signal reliability—reduced noise/short-risk in dense layout by routing power + sensor + I/O with functional grouping across 16 GPIO connections and separating high/low-noise paths.
- Increased build maintainability and troubleshooting speed by implementing dedicated power rails + consistent wiring standards, keeping the prototype organized and repeatable for future revisions.

### Digital Sensor Fusion System | Arduino/C++

December, 2025

- Developed a real-time multi-sensor system on an Arduino Uno to measure distance + temperature/humidity, by fusing HC-SR04 + DHT11 sensor inputs in C++ and outputting synchronized readings over Serial Monitor.
- Validated sensor operating range and stability by running repeated motion-change trials and documenting consistent readings up to sensor's usable range up to ~400cm, then logging results for analysis.
- Converted raw serial logs into analyzable datasets by parsing delimited data in Excel, exporting CSVs, and plotting distance vs. time to visualize trends and measurement behavior.

### 4-to-1 line Multiplexer | EDA Playground/VHDL

November, 2025

- Implemented a 4:1 MUX in VHDL using case statements to route a selected input to a single output, achieving correct logic behavior across all select states.
- Verified functional correctness by building a VHDL testbench that iterated 00/01/10/11 with controlled patterns and confirming outputs via waveform inspection (EPWave).

## EXPERIENCE

### **Lowe's Companies, Inc.**

Blaine, MN

Front-End Loader

May, 2025 – January, 2026

- Execute material-handling operations for heavy inventory—appliances + landscaping materials while maintaining 100% adherence to safety protocols, by following standard procedures and conducting hazard-aware loading practices.
- Reduced customer wait time by ~20% during peak season—May-June by implementing faster loading workflows and staging high-demand items, while safely transferring 40+ unit loads for 8-11 contractors per shift.