

# Travis Yu Chen

✉ tchen128@jh.edu | 📞 +1 (202) 910-8806 | 🌐 [Personal Website](#)

## Education

### Johns Hopkins University (JHU) - 4.00 GPA

*B.S. in Computer Engineering*

*Minor in Financial Economics*

**Baltimore, MD**

*Expected May 2026*

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- Relevant Coursework: Data Structures, Intermediate Programming, Computational Modeling, Digital System Fundamentals

### Montgomery Blair High School (MBHS) - 3.93 GPA

*STEM Magnet High School Diploma*

**Silver Spring, MD**

May 2023

## Technical Skills

- **Languages/Frameworks:** Python, C++, Java, FreeRTOS, Embedded Programming, Git, CSS HTML
- **Tools/Hardware:** SolidWorks, Arduino, Raspberry Pi, ESP32 microcontroller, Bluetooth Low-Energy, WiFi

## Professional Experience

### Biomedical Research Intern

*Catholic University of America*

**June 2022 - Sept 2022**

Washington, DC

- Developed a 2 degree-of-freedom hand exoskeleton to help stroke survivors rehabilitate impaired hand limbs using SolidWorks, and implemented part modularity to accommodate different hand sizes
- Recorded experimental data on exoskeleton performance with an Arduino Uno microcontroller and presented research findings at a research convention

### Assembly Intern

*Temple Allen Industries*

**Sept 2022 - Dec 2022**

Rockville, MD

- Assembled/validated paint-sanding machines to be used on commercial aircraft, and 3D-modeled product storage crates for shipping
- Streamlined internal delivery document templates to simplify handing off parts between internal departments

## Extracurricular Experience

### Embedded Software Engineer

*JHU Blue Jay Racing: Baja SAE*

**Sept 2023 - Present**

Baltimore, MD

- Implemented **Bluetooth Low-Energy (BLE)** and **Wi-Fi/MQTT** communication systems between a central Raspberry Pi and ESP32 micro-controllers with C++ to determine real-world wheel axle strain to guide future car designs
- Applied FreeRTOS to simultaneously record data with a 16-bit ADC and transmit data with BLE/Wi-Fi with interrupts to achieve up to 95% of the maximum data sampling rate
- Utilized a lightweight version of Google Protobuf to serialize outgoing wireless data and achieved transmission speeds of 8kB/sec with BLE and 75 kB/sec with MQTT per micro-controller

### Mechanics Project Lead

*The Blair Robot Project*

**Sept 2021 - May 2023**

Silver Spring, MD

- Managed a 5-person design team tasked with building hardware mechanisms using Autodesk Inventor for the FIRST Robotics Competition
- Developed a 1-degree-of-freedom claw that grabbed game pieces to maximize robot scoring potential, and the final competition robot qualified to compete at the 2023 FIRST World Championship
- Designed and fabricated a wiffle-ball-shooting robot used to inspire elementary school children at local STEM outreach events