Travis Yu Chen

tchen128@jh.edu | +1 (202) 910-8806 | Personal Website

Education

Johns Hopkins University (JHU) - 4.00 GPA — **Baltimore, MD**
B.S. in Computer Engineering — *Expected May 2026*
Minor in Financial Economics — *Expected May 2026*

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

Montgomery Blair High School (MBHS) - 3.93 GPA — **Silver Spring, MD**
STEM Magnet High School Diploma — 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 — **June 2022 - Sept 2022**
Catholic University of America — 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 — **Sept 2022 - Dec 2022**
Temple Allen Industries — 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 — **Sept 2023 - Present**
JHU Blue Jay Racing: Baja SAE — 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 — **Sept 2021 - May 2023**
The Blair Robot Project — 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