Travis Yu Chen

✉ tchen128@jh.edu | 📱 +1 (202) 910-8806 🔗 LinkedIn Profile

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
- **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
- 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