HUA BIN WU

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Portfolio: https://whuabin04.github.io/Project-Web/

Education

SUNY STONY BROOK UNIVERSITY

Bachelor of Engineering: Computer Engineering (GPA: 3.85/4.00) — Stony Brook, NY
Societies & Organizations: IEEE at SBU, Stony Brook Robotics Team (SBRT) — Expected Graduation: May 2026
Honors & Awards: Dean's List (2023)
Relevant Coursework:

- Embedded Microcontroller Systems Design
- Digital Designs with VHDL/PLDs
- Electronics
- Data Structures & Algorithms
- Deterministic Signals & Systems
- Electrical Circuit Analysis
- Applied Multivariable Calculus
- Linear Algebra

Experience & Activities

STONY BROOK UNIVERSITY — Stony Brook, NY
Undergraduate Teaching Assistant (AMS 161 - Applied Calculus II) — May 2023 - Jul. 2023

- Facilitated the application of analytical thinking to course learning outcomes for undergraduate students through weekly held 90 minutes office hours by explaining the step-by-step process of solving calculus fundamentals concept-related questions
- Returned individually graded and commented exams for a class of size 80, to the professor in a time-efficient, one-week manner utilizing spreadsheets

MIDWOOD HIGH SCHOOL'S FIRST TECH ROBOTICS TEAM (2021-2022) — Brooklyn, NY
Electrical Team (The Botley Crue 3371) — Sep. 2021 - Jan. 2022

- Maintained accurate bi-weekly updates on the electrical systems of the TETRIX robot by documenting the strengths and weaknesses of newly made adjustments in preparation for our high school's yearly FIRST Tech Challenge competition
- Ensured proper cable management and the re-organization of electrical components such as motors, sensors, and wires after the end of every general body meetup session
- Collaborated with the programming team to test and reduce the robots' downtime significantly and improve its controller-operating movement coordination and flexibility on the navigating field

INFINITY EDUCATIONAL PROGRAMS — Brooklyn, NY
Finish Carpenter — Jul. 2021 - Aug. 2021

- Supported multiple team members in re-touching surfaces of 10+ different classrooms and 3 individual floors through stripping, filling, and priming techniques before painting to create a visually appealing and welcoming atmosphere for returning students and teachers
- Adhered to school safety administrators to collectively re-organize the inside structures of a preschool to maintain a hazard-free and efficient learning space for younger children

Projects & Research

Student Researcher in Soft Electronics for Sensing and Actuation SBU VIP Team — Jan. 2024 - Present

- Collaborate with biomedical and mechanical engineering undergraduate and Ph.D. students in a long-term research project to develop and improve an eye-movement tracking reader utilizing soft electronics, magnetic sensing, and incorporating machine learning for electrooculography

Microcontroller-Based Smart LED Intensity Adjuster with User Interface — Sept. 2023 - Dec. 2023

- Utilized a 4x4 membrane keypad with an LCD module to create a real-time user interface that allows the user to accurately adjust the brightness intensity across LEDs with numerical keypress entries ranging from 0-100, on an AVR128DB48 microcontroller and programmed with Assembly

Multi-Function Variable Digital Clock — Sept. 2022 - Dec. 2022

- Designed a digital clock with ATMEGA4809, programmed with C++, on a PCB with settings that allow for 12/24-hour basis display in real-time as well as the ability to serve as a timer/counter using four 7-segment displays, and simultaneously act as a battery charger for other devices.

Skills

Technical: C/C++, Python, Assembly, MATLAB, VHDL (Aldec), Fusion 360, LTSpice, OrCAD Capture, Zoom, Microsoft Office Suite, Microchip Studio, Visual Studio, HTML, CSS
Laboratory: Oscilloscope, DMM, Function Generator, PB-505 Analog & Digital Design WorkStation, Electronics, Soldering, Arduino, AVR CuriosityNano, PLDs