Burton Tsai

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SUMMARY OF QUALIFICATIONS

- Computer Engineering student with a strong foundation in data structures, algorithms, and software development in Java and C/C++.
- Robotics software industry experience at Foxconn and ABB; published IEEE researcher with proven leadership in technical and business settings.

EDUCATION

University of Washinton, Seattle WA Expected Graduation: Spring 2028

- Bachelor of Science, Computer Engineering (GPA:3.86)
- Related coursework (through Spring 2026): Math Calculus III, Linear Algebra, Data Structures and Algorithms, Hardware/Software Interface, System Programming, Foundations of Computing I, Introduction to Digital Design, Introduction to Data Management
- Honors / Awards: Dean's List (Autumn 2024, Winter 2025, Spring 2025, Autumn 2025, Winter 2026, Spring 2026)

Kang Chiao International High School, New Taipei City, Taiwan June 2024

- Honors / Awards: Director's Award (June 2024), Academic Honor Award (June 2022, June 2023, June 2024)

RESEARCH EXPERIENCE

Institute of Electrical and Electronics Engineers ARIS Research, *Researcher* June 2024 – September 2024

- Researched State Estimation for Autonomous Surface Vehicles: A Neural Network-Assisted Observer Approach
- Published to IEEE

VOLUNTEER&INTERNSHIP EXPERIENCE

Foxconn, *Robotics Software Intern* July 2026 – September 2026

- Building a real-time digital twin of the Fiibot humanoid robot in NVIDIA Omniverse / OpenUSD.
- Developed a custom Omniverse Kit extension in Python to drive Fiibots in real time from streaming data.
- Deployed a Kafka broker and built a Python producer/consumer pipeline streaming joint telemetry into the simulation.

ABB Robotics Company, *Software Development Intern* July 2025 – September 2025

- Designed and developed software for the Omnicore controller.
- Gained hands-on experience in software integration with large-scale robotics systems.
- Collaborated with the team to optimize industrial robotics processes and improve system efficiency.

EXTRACURRICULAR ACTIVITIES

Washington Superbike, *Business Team*, *Electrical Firmware Team* October 2024 - Present

- Designed and tested firmware for onboard systems, developing embedded control logic for sensor data acquisition and power management.
- Secured sponsorships and managed partnerships to enhance brand visibility and community engagement.

Human Powered Submarine Team at University of Washington, *Electronics System Team* October 2024 – December 2024

- Attended weekly meetings to learn about submarine electronics.
- Assisted with system troubleshooting to support team goals.

LEADERSHIP EXPERIENCE

KCIS Math School Team, *Founder & Captain* January 2022 – May 2024

- Organized training materials and schedules to maximize organizational efficiency.
- Established a communication channel to avoid misunderstanding.
- Led the team to participate in the American Regions Mathematics League.

KCIS VEX Robotics Team, *Captain* May 2023 - May 2024

- Achieved effective leadership through task delegation.
- Developed robot design and construction plans.
- Participated in VEX V5 Taiwan Open competitions.

HONORS AND AWARDS

2023-2024 VEX V5 Taiwan Open, *Build Award* January 2024

American Regions Mathematics League, *Silver Award* April 2023

- Ranked in top 20% of all the participants.

2023-2024 PAS-VEX VRC Signature Event, *Energy Award.* December 2023