

Zach(Xizhe) Hao

Tel: +1-206-681-0368 | Email: xhao6@uw.edu | www.xizhehao.com

EDUCATION

University of Washington – Seattle Master of Science in Electrical and Computer Engineering	09/2024 – 06/2026
Southern University of Science and Technology Bachelor of Engineering in Automation <ul style="list-style-type: none">● GPA: 3.51 / 4.0 (86.24 / 100)● Honor: The Merit Student Scholarship (2022); Ruoshui Scholarship (Top 10 over 833 students)(2023)● Core Modules: <i>AI and Machine Learning, Microprocessors and Microsystems, Digital System Design</i>	09/2020 – 06/2024

RESEARCH EXPERIENCE

Network Circuit Experiment System Based on Digital Twin, Competition Project	09/2022-06/2024
● Led the circuit experiment segment, focusing on circuit construction and integrated relay control; used Raspberry Pi I/O interface for seamless hardware-software interaction, ensuring robust PC communication	
● Collaborated in the implementation of a digital twin 3D model, enabling user interaction with circuit components via a web interface; facilitated real-time data manipulation and experiment data recording	
● Awarded Second Prize in the South China Division of Industry Integration and Innovation Competition	
Caterpillar-inspired Robot with Battery and PCB board, Project for NCSU's Research Program	01/2024-02/2024
● Spearheaded the control segment of a pioneering caterpillar-inspired robot project, focusing on intricate circuit designs to facilitate multiple crawling modes through joule heating and friction manipulation	
● Designed and executed control circuits on PCB board with NMOS switches for exact thermal-driven motion, integrating Wi-Fi and Bluetooth for dynamic robot control	
Intelligent Fridge System, Project for NUS's SOC Summer Workshop	07/2023
● Led a team of three to design an intelligent refrigerator system for food management and environmental monitoring, integrating AI for recipe suggestions and expiration alerts;	
● Enhanced data accuracy by optimizing the YOLO-v8 model for precise food categorization	
● Built a hybrid transmission system connecting Raspberry Pi and Micro:bit for real-time data capture and processing	
● Developed a web portal on Huawei Cloud using GAUSS DB for dynamic recipe recommendations via SQL queries	
Smart Watering System Based on Raspberry Pi, Patent Project	09/2022-05/2023
● Created a plant digital twin on Alibaba Cloud IoT, enabling user-controlled remote monitoring and watering	
● Integrated Raspberry Pi and environmental sensors for real-time plant monitoring and simulation	
● Developed an algorithm for automated watering and critical level alerts based on data on air conditions and water levels; enabled proactive plant care through sensor-driven water pump activation	
● Secured a patent from the China National Intellectual Property Administration (CN220441530U)	

ENTREPRENEURSHIP

Shenzhen Suishi Technology Co, Ltd., Founder	04/2023-06/2024
● Platform Development: Launched a comprehensive campus special offer platform, partnering with major platforms (Meituan, Taobao, Jingdong) to provide college students with exclusive discounts on food, entertainment, and online shopping; successfully expanded the platform to 3 universities and achieved 10,000+ user registrations	
● User Experience & Interface Design: Mapped user journeys to understand user needs, designed and implemented the front end of a WeChat mini-program using JavaScript and Wechat Devtools	
● Data Analysis & Strategic Planning: Used Tableau for data visualization, analyzing user trends and behaviors to inform financial management and company strategy; implemented UI enhancements and functionality optimizations in mini-programs to boost user engagement	

ACTIVITY

Volunteer Association of Southern University of Science and Technology, Volunteer	09/2020-06/2024
● Contributed 200+ hours across 50+ diverse events, enriching children's science literacy	
● Awarded the "Top 10 Volunteer" from Southern University of Science and Technology in 2022	
News Agency of Southern University of Science and Technology, Director	09/2021-09/2022
● Coordinated 100+ members to manage the official social media accounts of the university and its magazine	
● Won the "Most Impactful University News Work" from China Youth Daily	

SKILLS & INTERESTS

Languages: Mandarin (native), English (IELTS 7)
Skills: Linux, VHDL, Python, Java, MATLAB, C, C++
Research Interest: Internet of Things, Artificial Intelligence & Machine Learning, Embedded System