Jirat (Aomsin) Nimsombun

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EDUCATION

University of British Columbia   Vancouver, BC
Bachelor of Applied Science in Integrated Engineering: Mechatronics Specialization   *Expected: April 2028*
International Major Entrance Scholarship Recipient ($80,000)
Co-op Availability: 4 months beginning May 2024

TECHNICAL SKILLS

Programming Languages: C/C++, MATLAB, Python, 8051 Assembly, VHDL, HTML, CSS, SystemVerilog
Software & Tools: Arduino IDE, SOLIDWORKS, MATLAB, Git, VS Code, Jupyter, Quartus, ModelSIM, LTSpice
Coursework: Digital Systems & Microcomputers, Linear Circuits, Fluid Mechanics, Thermodynamics, Materials I

TECHNICAL EXPERIENCE

Summer Engineering Intern, Facility Management – One Bangkok   May 2024 – August 2024
Jones Lang LaSalle (JLL)   *Bangkok, Thailand*
- Collaborated with Certis Singapore to implement Mozart, a Smart Integrated Security System for the District Command Centres at One Bangkok, ensuring systems complied with local regulations and requirements.
- Contributed to the integration of Digital Twinning solutions for Preventive Maintenance (PPM) with the Mechanical, Electrical, and Plumbing (MEP) team, optimizing maintenance processes within the Mozart platform.
- Assisted in drafting Standard Operating Procedures (SOPs) and Emergency Response Plans (ERPs) to address cyber breaches, MEP failures, and security threats, utilizing Swimlane diagrams for streamlined implementation.

PROJECTS

AI-Tracking Blimp | *Project Management, Embedded Systems, Machining, Python*   November 2024 – Present
- Led a team of 6 to develop a blimp for human detection in convention centers, improving tracking for data analysis.
- Prototyped a lightweight blimp with helium and optimized casing, integrating ESP32 and ArduPilot for precise autonomous navigation, flight control, and YOLOv11 for real-time human detection using computer vision.

National Strategy Consulting Competition (NSCC) 2024 | *Competitor*   November 2024
- Developed strategies to address financial challenges for TransLink, focusing on revenue growth and cost reduction.
- Proposed a three-stage plan with a centralized Super App, analyzing balance sheets to boost revenue by 120%.

Line-Following Robot | *CAD, Rapid Prototyping, C++, Arduino, Soldering*   September 2024 – January 2025
- Engineered and developed a robot to autonomously follow a path using infrared sensors for accurate line detection.
- Optimized PID controls and tuned parameters to improve performance and ensure smooth operation in scenarios.

OTHER EXPERIENCE

Sponsorship and Budgeting Coordinator   September 2023 – Present
UBC Thunderbots   *Vancouver, BC*
- Member of UBC's interdisciplinary student team developing autonomous soccer robots for global RoboCup competitions (3000+ participants), achieving **2nd** place in RoboCup 2024 SSL Division B as Grand Finalists.
- Oversaw sponsorship acquisition, including $10,000 in PAF applications, website management, and crowdfunding initiatives, collaborating with mechanical, electrical, and software teams to meet budgeting and sponsorship needs.

Co-President   April 2024 – Present
UBC Association of Southeast Asian Clubs (UBC ASEAC)   *Vancouver, BC*
- Co-led 7 Southeast Asian clubs at UBC with 700+ members, overseeing operations, member engagement, and managing sponsorship, consulate relations, and partnerships to promote Southeast Asian cultural awareness.
- Led events like "Taste of SEA" with 200+ attendees, managing a $5,000 cash flow, ensuring successful execution.

OTHERS

Interests: Swimming (Provincials), Track & Field (Provincials), Golf, EcoHistory, Skiing, Basketball, Venture Capital