HOANG VU

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EDUCATION

University of Waterloo   September 2019 – August 2024
Bachelor of Applied Science in Mechatronics Engineering Honours, Co-op Program   *Waterloo, Ontario*

SKILLS

Design	SolidWorks, AutoCAD, GD&T
Systems	Arduino, ROS2, Gazebo, Webots, Roboviz, PLC
Software	Python, JavaScript, React, HTML, CSS, C++, VBA, VHDL, Assembly
Tools	Git, MATLAB, Simulink, Linux, Soldering, MS Office

EXPERIENCE

Quality Engineering Intern   May 2023 – August 2023
Yanfeng - Yanfeng Automotive Interiors   *Mississauga, Ontario*

- Developed design verification procedures for component assembly lines, impacting over **100,000** Chrysler Pacifica models
- Created a **VBA** tool to monitor OEM status for annual PPAP revalidation, reduced the backlog of expired documents by **86%**
- Analyzed supplier reject reports and scrap system data to identify defective parts, validating over **$10,000** chargebacks
- Issued quality alerts that reduced non-conforming parts, improved customer satisfaction and quality feedback by **73%**

Electrical Engineering Intern   September 2022 – December 2022
NORR - Architects Engineers Planners   *Toronto, Ontario*

- Conducted site surveys across **240,000+ sq.ft.** of Sunnybrook Hospital, documenting precise conditions and identifying limitations to inform comprehensive project decisions
- Managed and manipulated datasets of **12,000+** rows in **Excel** using advanced library functions and custom-built scripts
- Prepared and reviewed project deliverables, contracts, and shop drawings, ensuring adherence to high-quality standards
- Collaborated with cross-functional teams to align schedules and provide consistent project timeline updates

Manufacturing Engineering Intern   January 2022 – April 2022
Magna International Inc - Modatek Systems   *Milton, Ontario*

- Resolved cycle time issues in assembly lines by troubleshooting and rearranging weld sequences, eliminating 2 bottlenecks and reducing their cycle times by 10.1% and 8.9%, respectively
- Collaborated with Materials Department, utilizing inventory data to design and place bins/racks for improved efficiency
- Created an Excel **KPI** dashboard consolidating data from multiple sources and developed 50+ documents for SOPs, BOM

Electronics Engineering Intern   March 2020 – April 2020
Fade Away Laser Tattoo Removal   *Remote*

- Prototyped an end-to-end **Arduino** system to automate and streamline the use of cryogenic and laser devices
- Implemented the **I2C** protocol on Arduino boards, enabling real-time wireless data transfer between remote devices

Engineering Intern   January 2020 – February 2020
Quali AI   *Kitchener, Ontario*

- Designed camera housings using **SolidWorks**, researching materials and mounts to optimize production costs
- Independently developed a new version of the company website in 2 weeks, mastering **JavaScript, React, HTML, CSS**

PROJECTS

Compost Dehydrator | *SolidWorks, AutoCAD, 3D Printing, Laser Cutting, Machining*   October 2023 – March 2024
- Led a team of 4 in the mechanical design and construction of an automated system to dehydrate food scraps for optimal composting, resulting in a nomination for the sustainability award

TurtleBot 4 | *Gazebo, RoboViz, Python, ROS2*   October 2023 – November 2023
- Developed a comprehensive software stack for a mobile TurtleBot, implementing **OOP** in **Python**, **PID** control, **A*** and **RRT*** pathfinding algorithms, and an **Extended Kalman filter** for precise localization