Yibo Yang

21018595, 3A Mechatronics Engineering
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SUMMARY OF QUALIFICATIONS

Languages: JavaScript (ES6+), Python, C++, MATLAB, VHDL
Tools: Git, GitHub, MATLAB, LabVIEW, Render, SolidWorks, AutoCAD
Frontend: React, HTML5, CSS3, Next.js, Vue.js, TypeScript
Backend: Node.js, Express.js, Knex.js, Postman, Bcrypt, Fastify, NestJS, Django
Database: PostgreSQL, MySQL, SQLite, MongoDB

PROFESSIONAL EXPERIENCE

Valeo Sep. 2024 – Dec. 2024
R&D Software Engineering Intern Michigan, United States

- Developed **AI-based Multi-Zone HVAC Airflow Control Solutions** to replace complex forward modeling, reducing calibration time and improving airflow prediction accuracy
- Automated data collection for over **9,500 bench test conditions**, accelerating model training
- Integrated **MATLAB/Simulink neural network models** into HVAC control systems, ensuring seamless deployment and performance validation

Valeo Jan. 2024 – April 2024
R&D Engineering Intern Hubei, China

- Assembled a test bench that integrates power supply, control board, and communication modules
- Implemented **power control**, **CAN/LIN communication**, and **motor testing parameters** in **C** to provide precise control and real-time adjustments
- Developed an Active Grille Shutter (AGS) upper computer using **LabVIEW**, enabling customizable execution of multi-mode alternating tests

HYC May 2023 – Aug. 2023
Mechanical Engineering Assistant Jiangsu, China

- Designed and developed an efficient test fixture that contains **200+** parts for PCB testing in products
- Created **assembly drawings** with proper GD&T that simulate real-world operating conditions

KEY PROJECTS

Face Recognition Web App Sep. 2024 – Dec. 2024

- Developed a full-stack web application with secure user authentication and face detection
- Designed a responsive UI using **React**, **CSS3**, and **Toastify** for real-time feedback
- Implemented backend services with **Node.js** and **Express**, and managed data with **PostgreSQL** and **Knex.js**.

Cubli May 2023 – June 2023

- Designed and built a self-balancing cube that can balance on its edges and corners, using **reaction wheels**, **brushless DC motors**, and **PID control systems**
- Implemented **gyroscopes, accelerometers**, and **motor encoders** for dynamic balancing

EDUCATION

Candidate for BASc in honours Mechatronics Engineering
University of Waterloo, Waterloo, Ontario Sept. 2022 – Present