Jade Cao

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Relevant Experience

Electrical Designer, *Husky Technologies* **2022 - 2023**

- Resolved non-conformance issues regarding the electrical design of injection molding machines. Supported electrical cabinet manufacturing, machine integration, and test/validation.
- Developed a tailored digital tool to streamline the reporting of missing parts and non-conformance issues on the production line, using C# programming and Azure DevOps. Resulted in increased workflow efficiency and enhanced visibility on the production floor.
- Configured electrical schematics of machine control systems, representing system components, and wiring diagrams with circuit design software EPLAN. Revised schematics based on evolving project requirements and improvements.

Research Assistant, *Hamilton Health Sciences and McMaster University* **Summer 2020 and 2021**

- Performed program validation for fibrin clot analysis utilizing scanning electron microscope images. Developed end-user documentation to be used in undergraduate course development at McMaster University, and instructional material at Hamilton Health Sciences.
- Researched and analyzed scientific information on neonatal circulation and portal vein thrombosis. Designed models with 3D computer graphics software, Blender. Presented information on a webpage, utilized JavaScript, HTML, and CSS, hosted on GitHub.
- Supervised by Dr. Anthony Chan, Professor of Paediatrics and Director of the Paediatric Thrombosis Clinic and Hemophilia Clinic at McMaster Children's Hospital. Received $6000 funding from the Biotalent Student Work Placement Program.

Technical Design, *McMaster University* **2022**

- **Ultrasonic Range Finder:** Conceptualized an ultrasonic range finder, and demonstrated functionality with SPICE simulation and circuit design software Multisim. Implemented top-down design and system integration of analog and digital electronic components. Performed extensive debugging strategies with oscilloscopes, waveform generators, multimeters, and similar lab equipment.

Education

Engineering Physics & Biomedical Engineering (Co-op), *McMaster University* **2019 - 2025**

- cGPA: 3.93. Dean's Honour List (2019-2022), President's Entrance Scholarship (2019).
- Relevant Courses: Circuits with Non-Linear and Active Components, Embedding and Programming a Microcontroller, Biomedical Instrumentation and Measurement.

Volunteer & Extracurriculars

Leadership & Development Coordinator, *McMaster Engineering Society* **2021 – 2022**

- Appointed to oversee the development of leadership and professional skills for students within the Faculty of Engineering at McMaster. Managed committee and delegated responsibilities to execute events such as LinkedIn photoshoots, and engineering competitions.

Equity, Diversity & Inclusivity (EDI) Co- Chair, *McMaster Women in Engineering Society* **2021 – 2022**

- Co-Directed and hosted an online conference for 250+ signups, assembled keynote speaker, student graduate panel, and workshop hosted by the chair of the Ontario Network of Women in Engineering. Devised and executed events to educate undergraduate students on EDI.