Xinchen Zhou

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EDUCATION

University of Michigan - Ann Arbor, MI **Sept. 2021 – Dec. 2022 (expected)**

- M.S.E. in Mechanical Engineering

McGill University - Montreal, Canada **May. 2021**

- B.Eng. in Mechanical Engineering - Internship Program (CGPA: 3.75/4.0- Distinction)
- Faculty of Engineering Scholarship and Dean's Honor List for Top 10% of Students (2020)
- John Howard Ambrose Scholarship (2017)

PROFESSIONAL EXPERIENCE

Process Engineer Intern **May. 2019 – Aug. 2019**

TTM Technologies, Toronto, Canada

- Conducted testing to calibrate aperture of a UV/CO_2 laser drilling machine, simultaneously improving drilled hole wall quality, and reducing cycle time by 5% to 15%
- Generated 20+ laser drill recipes for new work orders with various dielectric materials
- Reviewed 3D cross sections for 160+ work orders, developing flow chart to improve work efficacy

Reliability Engineer Intern **Jan. 2018 – Apr. 2018**

IKO Industries Ltd, Hawkesbury, Canada

- Calibrated and drafted 10+ machine element drawings from production line equipment in AutoCAD
- Implemented 60% plant asset CAD drawings onto the Document Navigation Accelerator (DNA), an internal app designed for plant operators to easily access equipment details and specifications

RESEARCH AND ACADEMIC PROJECTS

Python Flask Engineering Web Applications – xinchenzhou.net **July. 2021 – Aug. 2021**

Composite Mat Calculator

- Developed an input and output program to enable design based on computing laminate stiffness, compliance matrix, and performing failure analysis for composite laminates and honeycomb structures

2D diffusion equation Solver

- Solved the 2D diffusion of Heat equation over a squared plate with Dirichlet Boundary Conditions using the Alternating-Direction Implicit (ADI) Scheme

2D Airfoil Mesh Grid Testing Project – McGill University **Jun. 2020 – Sept. 2020**

- Generated structured C-grid meshes and converted exported Gmsh Plot3d structured files to executable format for aerodynamic shape optimization codes (SYN103) in MATLAB

***Refrigerator Compressor Noise Reduction Proposal Project* – McGill University** **Jan. 2020 – Apr. 2020**

- Performed detailed cost analysis and feasibility study based on bill of materials and market price
- Modified compressor CAD files in Simcenter 3D for subsequent acoustic analysis, carrying out engineering thermal analysis in Siemens NX; received Best Presentation in Final Report 2020 Awards

Programming Skills and Areas of Experience

- **Engineering Simulation:** MATLAB, Simulink
- **CAD:** AutoCAD, SolidWorks, Simcenter 3D, NX Nastran
- **Programming Languages:** Python (Numpy, Pandas, Flask), HTML, Git
- **Finite Element Analysis:** ANSYS (Static Structural Analysis), Abaqus, Gmsh

Additional Information

- Canadian Citizenship