Howard Wen

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EDUCATION

Western University & Ivey Business School	**London, Ontario**
B.E.Sc in Mechatronic Systems Engineering & Honours Business Administration	Expected May 2026

- **GPA:** 3.95 / 4.0 – Dean's Honour List (2023, 2024)
- **Honours:** Western Scholarship of Excellence ($8000 - Top 250 Students), Jon and Nancy Love HBA Award ($14,600)

EXPERIENCE

Canadian Severe Storms Laboratory	**Olds, Alberta**
Research & Development Intern - Field Operations and Instrumentation Team	May 2024 – Aug 2024

- Led development on a hail measurement instrument. Designed and iteratively optimized weather-resistant enclosures and sensor software, improving deployment speed and sensor accuracy through data-driven evaluations. Presented product to leadership resulting in a research paper, purchase contracts, and research initiatives in Switzerland, USA, and Australia
- Improved hail collection during storm intercepts by proposing new strategies and overseeing implementation. Trained colleagues on new roles, built a new hail collection instrument, and collaborated with American researchers on new deployment methods. Improved performance using data from prior deployments, increasing hail collection by 35%
- Built and refined data analysis software using AI and Python science libraries to analyze over 100k collected data points, giving insight on new instrument techniques with sound sensors and continuous waveform radars for further exploration

ArenaPetro	**Beijing, China**
Software Developer Intern - Embedded Systems Division	May 2023 – Jul 2023

- Developed data visualization software to expedite debugging and rapid prototyping of sensor equipment. Collaborated with full-time staff to create an intuitive UI with custom features based on needs, decreasing development costs by $45k
- Started an intern initiative to fix faulty devices for an upstream well-logging instrumentation firm. Designed a workflow pipeline to reduce hand-off friction and inefficiencies, guided interns on software and debugging techniques, and created evaluation guidelines to find improvement areas, ultimately saving over 60 hours of work from full-time staff.

Centre for Suicide Prevention	**Calgary, Alberta**
Software Developer Intern - Library Management Team	May 2022 – Aug 2022

- Converted 8,000 library resources at CSP to pdf form. Optimized digitization process by refining scanning software and being detail-oriented to ensure high-quality preservation, improving accessibility to mental health resources for all
- Spearheaded development of a Python program for inputting file data, expediting upload of 10,000+ files by 80 hours

EXTRACURRICULAR EXPERIENCE

Research Instrumentation & Consulting	**London, Ontario**
President	Sep 2024 – Present

- Founded an engineering research company that helps science researchers without engineering backgrounds to develop prototypes and instrumentation at Western University, filling a key skill gap to expedite and improve research goals
- Developed and maintained working relationships with researchers to secure over $5.5k in project contracts, collaborating closely with clients to understand their research objectives and project goals to ensure efficient and accurate deliverables
- Managed and delegated various project tasks, resulting in quality results and expediting research goals by 8+ months

Western Engineering Competition	**London, Ontario**
VP Competitions	Sep 2022 - Present

- Oversaw hiring for competition directors and planning of Sr. Design, Re-Engineering, and Debate categories. Worked with teams to create appealing topics and formats, resulting in challenging, interesting, and engaging competitions
- Liasoned co-chairs, VPs, and competition directors to ensure all ideas and competition requirements were unified, leading to a turnout of over 800 competitors across all categories, the largest engineering competition in the province

SKILLS

- **Python:** PyTorch, MicroPython, Matplotlib, pandas, SciPy, Flask, PyMongo, VTK, tkinter, Requests, smbus2, spidev
- **Other:** JavaScript (React, Next.js), C, Java, Arduino, MongoDB, Excel, PowerPoint, SolidWorks
- **Interests:** park and backcountry skiing, the avant-garde, reading, high fashion, piano, music