Yamaan Bakir

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Education

Ivey Business School, *HBA – Honours Business Administration* Sep 2022 – Apr 2024

Western University, *BESc – Mechatronics Systems Engineering* Sep 2020 – Apr 2024

Awards: Dean's Honours List, Western Undergraduate Summer Research Internship (USRI), Western Summer 2021 Student Teaching Support Internship

Experience

Electrical Team Lead, *Western Formula Racing* Sep 2020 – present │ London, ON
- Implemented a new task tracking system as the program manager for the 2023 season reducing management workload
- Pioneered new documentation to help onboard recruits, reducing onboarding time by 50%
- Lead the development for vehicle control unit software, allowing for the safe operation of the vehicle
- Implemented the 2022 wiring harness and solved packaging conflicts with other team leaders

Biomedical Engineering Research Intern, May 2022 – Aug 2022 │ London, ON
Lawson Health Research Institute
- Developed a custom motor control board and wrote control algorithms in C for position control, reducing overall space consumption and wiring by 90%
- Debugged PCBs by examining behaviour with an oscilloscope, allowing for repair rather than disposal
- Performed over 20 experiments using Stewart-Platform robots validating several simulated models

Mechatronics Representative, Sep 2021 – Apr 2022 │ London, ON
Western Undergraduate Engineering Society
- Mobilized student leadership to initiate policy change in the availability of online educational content for students
- Oversaw more than $500,000 worth of capital and disbursements therefore providing new equipment to over 100 students.

Student Teaching Support Intern, *Western University* Jun 2021 – Aug 2021 │ London, ON
- Spearheaded development of a project for students to work on that incorporated software, mechanical, and chemical engineering skills to broaden the scope of their design skills in first year. The project has been completed by over 850 students
- Redesigned Western's ES 1050 Design course while collaborating with its stakeholders, improving the student satisfaction rate by 25%

Projects

Western Engineering Support Bot, *Discord bot for helping students stay organised* 🔗
- Developed a *Discord* chat bot using Python that creates automated scheduling to help first year engineering students at Western University stay on task
- By creating schedules, answering frequently asked questions, and providing other support, Support Bot has been used by over 2000 students and has been contributed to by the open-source community

Portfolio Website, *Project Showcase Website* 🔗
- Created a Portfolio Website using React and Next.Js, building upon existing HTML,CSS, and JavaScript skills
- Learned how to create custom React Components and used TailwindCSS for styling
- Implemented Continuous Integration / Continuous Delivery using Netify

Technical Skills

Hardware Engineering: CAD/CAM, CNC Manufacturing, PCB Layout & Design, Hardware Validation, 3D Printing, MCUs, I2C, CAN Bus, Robotics
Software Engineering: Java, Javascript, C/C++, Python, Arduino, Matlab, HTML/CSS, Flutter, OOP, Web Deployment, Linux, Android Studio, OOD, JSON, Scripting
Design Tools: Solidworks, Altium Designer, Git/Github, Figma, Microsoft Suite, Excel, Unity