Shorya Pahuja

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Education

Western University **Expected Graduation: April 2028**
Bachelor of Engineering Science in Electrical and Computer Engineering *London, ON*

Relevant Coursework

- Data Structures
- Electric Circuits
- Digital Logic Systems
- Calculus I-III
- Linear Algebra
- Dynamics

Experience

Peacock Manufacturing Ltd. **May 2025 – August 2025**
Junior Engineer Intern *Mississauga, ON*

- Revised and released 20+ engineering drawings in AutoCAD, incorporating design changes and tolerances to support production and documentation accuracy.
- Designed and deployed a Wix-based internal website to improve accessibility of company and technical information.
- Verified product quality by inspecting 50+ machined components using vernier calipers and micrometers, identifying fit and tolerance issues.
- Supported production and design validation by fabricating metal and plastic components using mills, saws, and bandsaws to specification.
- Improved part safety and assembly readiness by deburring and finishing 100+ components to meet dimensional and edge-quality requirements.

Projects

Air Mouse & Gesture-Controlled Input System | *Python, OpenCV, MediaPipe* **October 2025 - Present**

- Developed a real-time hand-gesture mouse using a webcam, supporting 5+ gestures with stable performance around 25–30 FPS.
- Used hand tracking and simple gesture logic to improve usability and prevent accidental clicks.
- Mapped camera-based finger positions to full screen resolution for accurate cursor control across different displays.

3D Printer Enclosure | *Western Engineering* **January 2025 - April 2025**

- Designed and built a custom 3D printer enclosure with HEPA filtration, reducing internal temperature variation to within ±2–3 °C during active prints.
- Modeled enclosure geometry, airflow paths, and insulation in Onshape, iterating through 5+ design revisions to balance airflow, thermal stability, and manufacturability.
- Validated enclosure performance through multi-hour print tests, confirming consistent airflow containment and thermal behavior.
- Achieved 3rd place out of 160 teams and 1st place in the 3D Printing category for overall design quality, functionality, and execution.

SAD Lamp Diffuser | *Western Engineering* **September 2024 - December 2024**

- Improved light uniformity, as measured by 20–30% more even surface illumination, by designing a lofted 3D-printed diffuser
- Added automated brightness control, as measured by multiple user-selectable lighting modes, by programming Arduino Uno logic in C++.
- Reduced manual adjustment, as measured by zero user intervention after setup, by implementing timed intensity presets.
- Optimized diffuser performance, as measured by 5+ successful CAD iterations, by refining geometry in Onshape.

Technical Skills

Languages: Python, Java, C++
Developer Tools: VS Code, Eclipse, Excel, Word
Technologies/Frameworks: Linux, GitHub, JUnit, Node.js

Leadership / Extracurricular

Knight's Table Food Bank **July 2023 - December 2023**
Lead Volunteer *Brampton, ON*

- Led and coordinated a team of 10+ volunteers during daily food distribution, improving service flow and reducing wait times by approximately 20%.
- Oversaw distribution of meals to 300+ individuals per day, ensuring organized, efficient, and respectful service.