Arkajit Mukherjee

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Skills

Programming Languages: Python, C++, SQL, C (Arduino), HTML, CSS, JavaScript
Frameworks & Libraries: Tailwind CSS, React
Tools & Platforms: Git, GitHub, Microsoft Office
Soft Skills: Detail Oriented, Collaboration, Time Management, Continuous Learning, Systematic Thinking

Experience

Assembly Technician Intern Mississauga, ON
Excelitas Technologies Inc. *Jul 2021 - Aug 2021*

- Independently assembled and tested photonic UV curing systems, contributing to the production of medical and industry-grade photonic devices with a **98%+** first-pass yield rate.
- Performed functional testing and calibration of the OmniCure LX500 LED spot UV curing system under senior technician guidance, achieving **±1%** intensity tolerance and ensuring compliance with customer.
- Interpreted detailed engineering drawings and production manuals to assemble optical, electrical, and mechanical components, consistently completing approximately **30 units per week** while following **ESD safety protocols.**
- Documented assembly and testing results through **Microsoft Excel** to improve traceability and production workflow efficiency.
- Calibrated control buttons and user interface components on UV curing systems, achieving **100% input** response accuracy and improving device reliability.
- Collaborated closely with senior technicians, following detailed guidance to meet **tight production schedules** while gaining hands-on expertise in assembly and calibration processes.

Projects

Personal Portfolio Website | *HTML, CSS, Tailwind, Git, Github* *Sep 2025*

- Developed and deployed a personal portfolio website using HTML, CSS, and Tailwind CSS to showcase projects and experience.
- Designed a fully responsive layout tested across **3 device breakpoints** (desktop, tablet, mobile) to ensure consistent user experience. Leveraged **Tailwind CSS** utility classes to build responsive, mobile-first layouts and streamline styling with reusable, maintainable design patterns.
- Collaborated with peers to gather feedback and iteratively improve website design, demonstrating adaptability and attention to user experience.

Arduino Slots Machine | *C, Arduino IDE, Hardware Design, Github* *Jun 2025*

- Developed a 3-reel slot machine on **Arduino Uno R3**, driving 3 DC motors via **L293D** motor drivers to simulate mechanical reel spinning.
- Designed and wired a **10+ component prototype circuit**, including motors, LEDs, push buttons, and resistors for user input and visual feedback.
- Optimised game play logic to achieve consistent spin cycles under 1.5 seconds per reel for smooth, realistic slot behaviour. Conducted **100+ tests** to validate random outcomes and reliable performance.

Certifications

- Introduction to Front-End Development | Meta (Coursera) *Aug 2025*
- Fundamental Skills in Engineering Design | University of Leeds (Coursera) *Jul 2024*
- Interfacing with the Arduino | University of California, Irvine (Coursera) *Aug 2024*
- The Arduino Platform and C Programming | University of California, Irvine (Coursera) *Aug 2024*
- Engineering and Product Design Processes | Arizona State University (Coursera) *Sep 2024*

Education

University of Waterloo Waterloo, ON
Bachelor of Applied Science (BASc), Computer Engineering *Sep 2025 - Apr 2030 (expected)*

- **Relevant Coursework**: ECE 150 (Programming Fundamentals), ENGL 192 (Communication in the Engineering Profession), ECE 190 (Engineering Profession and Practice)