# Soham Kundu

647-615-4436 | soham.kundu@mail.utoronto.ca | linkedin.com/in/sohamkundu-me | https://kundu-soham.github.io/

## Education

**University of Toronto** Toronto, ON

*Bachelor of Applied Science in Mechanical Engineering + PEY Co-op* *Sep. 2024 – Apr. 2029 (Expected)*

**Technical Skills**: SolidWorks, Certified SolidWorks Professional (CSWP), Basic Machining Certified, GD&T, Matlab, 3D-Printing, Python, Java

## Experience

**Mechanical Design Engineer** Sep. 2024 – Present

*University of Toronto Supermilage Team* *Toronto, ON*

- Designed and modeled precision carbon fiber jigs and mounts in **SolidWorks** with ±0.2 mm tolerance, applying **DFM principles** that reduced floor assembly time by 30% and improved drilling accuracy during composite chassis production.
- Lead the **carbon forging** of rear brake mounts by **3D printing** high-temperature molds, performing surface preparation, resin application, and manual carbon fiber layup, **producing high-strength forged carbon components** with consistent fiber orientation and minimal voids.
- Collaborated with a cross-functional team of 10 engineers to fabricate and assemble a carbon fiber monocoque floor, managing component fitment and sourcing materials through **McMaster-Carr**, which lowered procurement costs by 12% while maintaining structural integrity.
- Developed and integrated aerodynamic assemblies, including two wheel wells, two tie-rod covers, and a lightweight carbon fiber tire hub casing, achieving a **15% weight reduction** over the previous aluminum-steel design and improving structural alignment in the full vehicle CAD model.

**Mechanical Engineering Student** Jan. 2025 – Apr. 2025

*University of Toronto Facilities & Services, University of Toronto Sustainability Office* *Toronto, ON*

- Led the redesign of the 3rd-floor rooftop of Chestnut Residence (1100+ student dorm) to reduce heat loss and improve year-round access, projecting **$12,000 in annual HVAC savings.**
- Collaborated with 5 engineers to evaluate 50+ design concepts using Excel and Blender, ultimately developing a high-feasibility green roof plan with **0.5%–2% ROI.**
- Conducted client interviews and technical scoping to convert stakeholder vision into a 70+ page concept design specification document aligned with budget and code constraints.
- Delivered the final proposal to the Engineering Manager and department executives through a live presentation and slide deck, and received approval to proceed with the implementation feasibility study.

**Engineering Student** Sep. 2024 – Dec. 2024

*University of Toronto Sustainability Office* *Toronto, ON*

- **Led a team of 6 engineers** in redesigning the Bahen Courtyard and indoor restaurant into a sustainable, eco-friendly gathering and dining space.
- **Conducted client meetings** to define and refine the problem statement, ensuring alignment between client objectives and design direction.
- Developed a 20+ page **project requirements document** and produced 50+ conceptual designs, narrowing them down to 3 final proposals in a **30+ page conceptual design specifications document.**

## Projects

**Portfolio:** https://kundu-soham.github.io/

**Hobbyist Level Robot Arm for Cinematography** | *Project* Sep. 2025 – Dec. 2025

- **Designed a 6-DOF robotic camera arm** by benchmarking 10+ commercial systems and defining requirements (>1.5 m reach, 3–7 kg payload, <100 kg mass, <$3,000 cost), delivering a feasible system-level concept.
- Conducted mechanical analysis and component sizing, including **torque and inertia calculations**, specifying a 75:1 planetary gearbox (195 N·m) and 450 N·m joint torque to ensure stable dynamic performance.
- Modeled the final assembly in **SolidWorks** and produced **professional engineering drawings**, using a weighted Pugh Matrix across 4 concepts to select an optimized design achieving a 2 m reach and 3–7 kg payload.