Soham Kundu

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Education

University of Toronto Toronto, ON

Bachelor of Applied Science in Mechanical Engineering *Sep. 2024 – Apr. 2028 + PEY Co-op*

Techincal Skills: SolidWorks, **George Brown Machining Course 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.
- Supported 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.

Project Manager 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/

One-Cylinder Pneumatic Engine | *Personal Project* Sep. 2025 - Oct. 2025

- Fabricated a one-cylinder pneumatic engine **following professional engineering drawings**, **machining 8 precision components** from aluminum and steel using a **manual mill, lathe, and drill press** to achieve ±0.001 in tolerances and surface finishes within 32 µin Ra.
- **Assembled the engine** with proper alignment and sealing, **utilizing dial indicators and micrometers** to ensure air-tight fitment between piston and cylinder.
- **Conducted performance testing** under 40–100 psi compressed air, measuring rotational speed (∼1,200 RPM) resulting in smooth continuous operation and validated mechanical integrity.