RIDDHIMAN ROY

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PROFILE

Engineering Science student at the University of Toronto, with Aerospace Engineering major, Robotics minor and Business certificate, interested in working in aerospace design and sustainable development.

EDUCATION

BASc in Engineering Science

University of Toronto

September 2020 – June 2025 (Expected)

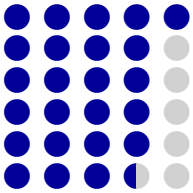
International Baccalaureate Diploma - 41/45

American School of Doha

August 2016 – May 2020

SKILLS

Python
Computer Aided Design
C
MATLAB
Tooling
Web Design



Rapid Prototyping | Microcontrollers | Quick Learner | Problem Solver | Collaboration | Communication | Empathy

ACHIEVEMENTS

2nd Place

Biomedical Engineering Competition (BMEC 2021)

February 2021 — Toronto, ON

Designed 'Mediway' - an application to route ambulances across a network of hospitals to reduce ER stress and physician burnout - and its information flowchart and the user interface

Most Feasible Design Award

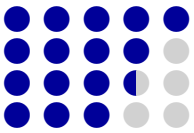
BMEC 2022

Febrary 2022 — Toronto, ON

Designed "Le Penguin", a device to help Alzhiemer's patients regulate their sleep cycles and maintain brain stimulation through engaging activities.

LANGUAGES

English
Spanish
Hindi
Bengali



EXPERIENCE

Research Intern

Department of Civil and Mineral Engineering, UofT

May 2021 – Ongoing — Toronto, ON, Canada

Summer 2021

- Received ESROP-UofT grant to work on climate research with the Saxe-Posen-Maclean (SPM) research group.
- Determined feasibility of transferring proprietary light duty vehicle greenhouse gas emissions model from R to Python.
- Investigated the potential for e-fuels in mitigation of greenhouse gas emissions of light duty vehicles in the US.
- Presented preliminary results to various stakeholders and undergraduate summer research conference.

Fall 2021 Onwards

- Received a casual employment contract to work with SPM and researchers from the University of Nottingham and CATARC to discuss the future and of FLAME.
- Worked with other graduate students to make efficient costing algorithms to predict the cost of vehicle ownership based on cost of manufacturing, fuel and others. This algorithm also predicted the greenhouse gas emissions and investigated the impact of various vehicle survival rates.

Developer on Project DarkMatter

University of Toronto Aerospace Team

Oct 2020 – Ongoing — Toronto, ON, Canada

- Working as a programmer on Project DarkMatter, UTAT's engine simulator to work with a team to translate the original model from MATLAB to Python.
- Designed and implemented a new class structure for various required processes and components such as combustion, propulsion, fluid and pressurant.

Pad Team Member

Launch Canada

May 2021 - August 2021 — Toronto, ON, Canada

- Joined Launch Canada's Liquid Rocket Engine Test Campaign, to test an LR-101 LOX-Kerosene Engine (capable of 4.5kN of thrust).
- Redesigned existing test stand to accommodate a new test site and manufactured the aforementioned new test stand.
- Produced a detailed procedure for efficient assembly and disassembly