

# Riddhiman Roy

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Research interests	Propulsion, Space Systems, Human Space Flight, Renewable Energy, Climate Change	
Skills	<b>Spoken Languages</b> – Fluent: English, Hindi; Spoken: Bengali, Spanish <b>Programming</b> – Proficient in: Python, $\text{\LaTeX}$ ; Familiar with: C, MATLAB, Java.	
Research experience	<b>Predicting GHG emissions of light vehicle fleets</b> May 2021 - Present - Computational model of greenhouse gas emissions of fleets light vehicles using FLAME (Fleet Life Cycle Assessment and Material-Flow Estimation) written in R. I received the ESROP-UofT grant worth \$6000 CAD and worked with Professors Daniel Posen, Heather Maclean and Alexandre Milovanoff. <b>Trasitioning Qatar to Renewable Energy</b> May 2019 – July 2019 - Studied sustainable engineering and renewable energy through an online course at Brown University. - Conducted land and climate analysis, wind turbine and solar panel evaluation, and financial estimates to design a plan for Qatar to transition completely from fossil fuels to renewable energy.	
Extracurricular Experience	<b>University of Toronto Aerospace Team (UTAT)</b> August 2020 to Present - Programmer on Project Dark Matter - computer simulation for liquid rocket dynamics from liftoff to main engine cutoff. - Integrating NASA CEA through RocketCEA in python to expand the simulator. <b>Biomedical Engineering Competition (BMEC)</b> February 27-28th, 2021 - Placed 2nd out of 20 in a team of 4. - Designed 'Mediway' - an application to route ambulances across a network of hospitals to reduce ER stress and physician burnout, the app's information flowchart and the user interface.	
Education	<b>University of Toronto (UofT)</b> Toronto, Ontario, Canada First Year, BASc in Engineering Science August 2020 to Present <b>American School of Doha (ASD)</b> Doha, Qatar ASD Diploma August 2016 to May 2020 International Baccalaureate Diploma <i>Score: 41/45</i> August 2018 to May 2020 <b>The Village School</b> Houston, TX, USA Grades 7 & 8 August 2014 to July 2016	
Training	<b>Harvard University</b> Online CS50: Introduction to Computer Programming May 2019 to December 2019 <b>Carnegie Mellon University - Qatar (CMUQ)</b> Doha, Qatar Summer College Preview Program May 2019 to August 2019 Classes in English, Calculus and Java <b>Brown University</b> Online Renewable Energy Engineering June 2018 to August 2018	
Teaching experience	<b>Teaching assistant, Science Department, ASD</b> Fall 2019 - Spring 2020 AP Physics 1: Advanced Placement Physics 1 - Worked with students through content of AP Physics 1 - Mechanics (translational and rotational), waves, and electricity and magnetism. - Duties included helping proctoring exams, lab assistance and stand-in for teacher when absent.	
Other interests	Badminton (played for my high school), tennis, table tennis, drawing	