

# NIKHIL MENDA

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## ENGINEERING EXPERIENCE

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### Lead Propulsion Engineer

May 2021 - Present

*Queen's Rocket Engineering Team*

- Leading a team of 15+ engineers to design, simulate, manufacture, test, and launch a 3.5kN Hybrid Rocket engine to reach a 10,000ft apogee.
- Overseeing the design and manufacturing of a propulsion test stand capable of withstanding 100+ hot-fire tests, complete with plumbing systems, data acquisition, and remote firing capabilities.
- Writing Python code to simulate a hybrid rocket engine and calculate performance metrics, such as specific impulse, regression rate, and thrust.
- Responsible for managing team dynamics delegating work, and tracking progress using Agile/Scrum.
- Managing a budget of over \$16,000 and maintaining stakeholder and sponsor relationships.
- Competing internationally against over 200+ design teams in the 10,000ft SRAD category.
- Created a public Hybrid Rocketry document repository that is used by multiple teams across Canada.

### Propulsion Safety Officer

May 2020 - May 2021

*Queen's Rocket Engineering Team*

- Developed safety guidelines and outlined the design requirements for construction and operation of our Hybrid rocket engine.
- Created standard operating procedures (SOPs) to maintain range safety during test fires.
- Created checklists to ensure the cleanliness of oxidizer systems.

### Research Assistant, PICO Dark Matter Search Experiment

May 2020 - August 2020

*SNOLAB, Supervised by Dr Anthony Noble*

- Designed parts for the next generation PICO 500 Dark Matter detector using SolidWorks.
- Analyzed thousands of neutrino events stored on FermiLab and ComputeCanada servers using Linux CLI and Python.
- Developed part of an interactive exhibit to communicate the science and engineering behind PICO using Python and a Raspberry Pi.

## TECHNICAL SKILLS

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<b>Software</b>	SolidWorks, Notion, MS Office Suite, FDM 3D Printing, Linux
<b>Languages</b>	Python, SciPy, C, Git, LaTeX
<b>Research</b>	Reading academic papers, Technical report writing and communication

## EDUCATION

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### Faculty of Engineering, Queen's University

Class of 2023

- Candidate for Bachelor of Engineering Physics, Computing Stream