

Nancy Abraham

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PROFESSIONAL SUMMARY

Data-focused MSc Physics graduate with 3+ years of experience analyzing large-scale datasets using Python and statistical modeling. Experienced in data cleaning, pattern detection, and translating complex findings into actionable insights. Seeking analytical roles where data-driven decision-making is central to operations and strategy.

SKILLS

Programming and Analysis: Python (pandas, numpy, matplotlib), SQL

Certifications: Google Data Analytics Professional Certificate

Data Tools and Visualisation: MS Excel (pivot tables, dashboards), Tableau

Machine Learning: TensorFlow, Keras (CNNs)

WORK EXPERIENCE

University of New Brunswick

Fredericton, Canada

Graduate Research Assistant

Sep 2022 - Apr 2025

- Analyzed 8,000+ hours of satellite data using Python and statistical methods to identify interference patterns impacting signal quality
- Cleaned, validated, and structured high-frequency time-series datasets; built repeatable preprocessing and quality-check workflows
- Extracted features and trends to distinguish true phenomena from artifacts; documented assumptions, methods, and limitations for reproducibility
- Collaborated with the CHAIN research network; supported analysis and validation efforts connected to High Arctic field activities
- Presented findings through a departmental seminar (100+ attendees from varied backgrounds)
- Authored and defended a 100-page **MSc thesis (technical report)** with data-driven recommendations; defended results before an academic committee/panel

University of New Brunswick

Fredericton, Canada

Teaching Assistant

Sep 2022 - Apr 2024

- Led weekly tutorials and lab sessions for 200+ first- and second-year physics students
- Graded assignments and exams; provided structured feedback to improve performance and understanding
- Simplified quantitative concepts into clear problem-solving steps to support diverse learning levels
- Tracked performance patterns across assessments to identify common problem areas and adjust tutorial focus

Sudaksh Technologies, LLP

Ahmedabad, India

Research Intern

Jun 2019 - Jul 2019

- Built and trained CNN models for image classification and obstacle detection
- Performed data preparation and preprocessing for training (organization, labeling/cleanup as needed)
- Ran experiments and compared model variants to select better-performing configurations
- Documented methodology and results; supported a client-facing technical presentation/demo

Physical Research Laboratory

Ahmedabad, India

Visiting Student Researcher

Jan 2021 - Dec 2021

- Cleaned and analyzed time-series scientific data in Python to study patterns and variability across observed parameters
- Implemented rotational temperature calculations and ran correlation analysis to test relationships between variables
- Delivered a concise report summarizing trends, key drivers, and analysis limitations

EDUCATION

University of New Brunswick

Fredericton, Canada

M.Sc., Physics | GPA: 3.7/4.0

Graduation Date: June 2025

Pandit Deendayal Energy University

Gandhinagar, India

B.Sc. (Hons.), Physics | GPA: 8.5/10

Graduation Date: June 2021

AWARDS AND FELLOWSHIPS

Graduate Research & Teaching Assistantship (UNB) — CAD 30K/yr (2022–2025)