

# Carrol Pascal Dabre

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## Experience

**Innodata Inc.**

**July 2023- April 2024**

Analyst-AI/LLM

Remote

- Training, collaborating & leading (as a quality auditor) across a global team on projects to ensure high-quality outputs.
- Crafting effective and engaging scientific prompt-response pairs and academic content (particularly physics & astrophysics).
- Reviewing & copy-editing prompt responses & scientific content to ensure high-quality content for LLM training.
- Developing training material on academic content and AI/LLM to be incorporated into LMS.
- Working closely on AI/LLM training projects focussed on text, images, videos, audio & speech.

## Skills

### Scientific Writing & Presentation

Research Articles, Dissertation, Project Reports, Literature Reviews, Poster Presentations, Powerpoint Presentations

### Digital Languages/ Softwares

LaTeX, MS: Word, Powerpoint, Excel, Python, Turnitin (plagiarism detection), GenAI Tools (Claude/GPT)

### Soft Skills

Organization, Time Management, Effective Communication, Attention to Detail, Collaboration, Leadership, Languages: English, Marathi & Hindi

## Learning Enhancement

Springer Nature: Course- **Editor Resources**

Springer Nature: Course- **Fundamentals of Peer Review**

How to 'Get Published'? by **IOP Publishing**

## Education

**St. Xavier's College (Autonomous), Mumbai**

**2021-2023**

Master of Science- Physics (specisalisation in Astrophysics): CGPA: 8.08/10

**St. Xavier's College (Autonomous), Mumbai**

**2018-2021**

Bachelor of Science- Physics: CGPA: 8.03/10

## Scientific Conferences

42<sup>nd</sup> Annual Meeting of the Astronomical Society of India (ASI 2024), Bengaluru, India     **Jan- Feb 2024**  
Science Undergraduate Research Conference 2023- Azim Premji University, Bengaluru, India     **Dec 2023**

## Research Experience

### Research Assistant

**November 2023- Present**

Collaborator: Prof. David Eden, Armagh Observatory, UK

Description: CLOUDY-based modelling of dense molecular gas clouds in various regions of the Milky Way galaxy.

### Master's Dissertation

**November 2022 - April 2023**

Title: An Investigation of Metals and Molecular Hydrogen in the Interstellar Medium

Supervisor: Dr. Katherine Rawlins, Assistant Professor, St. Xavier's College, Mumbai, India.

Description:

- The project aims to comprehend the characteristics of diffuse gas within the Galactic Interstellar Medium through numerical modelling with CLOUDY.
- By examining metal and molecular hydrogen abundances, the study employs a grid of models to simulate a wide array of physical and chemical conditions, including factors like radiation field, hydrogen density, and metallicity.
- The primary objective is to predict the column densities of neutral hydrogen and metal species observed in various Galactic sightlines, drawing upon research by Shull et al. (2021) and Konstantopoulou et al. (2022) for reference data.

### Master's Dissertation- Extended Research Work

**August 2023 - Present**

Collaborator: Dr. Katherine Rawlins, St. Xavier's College, Mumbai, India.

Description:

- Improving the efficiency of CLOUDY models to account for certain chemical species.
- Re-evaluating the computed models and making necessary changes to ensure their efficiency in predicting the column densities of all species.
- Expanding the range of variation in the input physical parameters.
- Preparing for a scholarly journal publication.