

Vishvam Porwal

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EDUCATION

University of Guelph

Guelph, ON, Canada

M.Sc. in Computer Science(Thesis-based) in Collaboration with Vector Institute of AI. September 2023 – September 2025

Rajiv Gandhi Proudlyogiki Vishwavidyalaya

Bhopal, MP, India

Bachelor of Technology in Computer Science and Engineering.

May 2019 – June 2023

EXPERIENCE

University of Guelph

Guelph, ON, Canada

Graduate Research Assistant(Supervised by Dr.Asim Biswas and Dr.Stacey Scott) September 2023 – Present

- Contributing to AgTech research focused on precision agriculture and digital soil mapping.

Graduate Teaching Assistant(Supervised by Dr.Daniel Gillis)

September 2023 – Present

- Aiding CIS2170 User Interface Design course of 200 students.
- Aided CIS3750 System Analysis and Design course of 100 students.

Quantive

Indore, MP, India

Machine Learning Intern

December 2022 – June 2023

- Trained Large language model variants, and optimized inference from Low-Rank Adaptation.
- Created an automated engine for extracting organizational statistical highlights, slashing data analysis time by 50%.

University of Guelph

Guelph, ON, Canada

Mitacs Globalink Research Intern(Supervised by Dr.Asim Biswas)

May 2022 – October 2022

- One of 150 candidates worldwide to be selected for this prestigious internship.
- Pioneered soil characterization through the implementation of computer vision techniques, resulting in a remarkable 200-hour reduction in lab analysis time for farmers.
- Translated research into a seamlessly integrated mobile application for the agriculture ecosystem.

Quantive

Indore, MP, India

Machine Learning Intern

October 2021 – May 2022

- Engineered a POC of a multimodal project, securing a \$1M contract with a global retail giant.
- Incorporated CLIP for pre-training on 100,000 image-text batches, speeding up convergence by 50%.
- Devised and implemented configurable end-to-end automation for production, cutting runtime by 86%.
- Invented a state-of-the-art algorithm for time series analysis, minimizing the time needed by 98%.

GSSOC'21, PSoC'21

Remote

Open Source Developer

March 2021 – September 2021

- Implemented ML-integrated web project admin section with analytics, including a Heat map increasing users by 40%.
- Created platform for new open-source contributors, fetching good first issues and implementing static code analysis.

PROJECTS

MPD Industries(Freelance) | *Dart, Flutter, Firebase, Python, Flask, MongoDB*

June 2021 – October 2021

- Launched a highly scalable cross-platform ERP application utilized by 1000-5000 users and developed a cutting-edge e-commerce platform tailored to the specific needs of 3000-4000 users.

PUBLICATIONS

- **Vishvam Porwal**, Stacey D. Scott, Neil D. B. Bruce, Asim Biswas (2024). Scalable Satellite-Based Land Viability Detection based on a Vision-Language Architecture. Submitted to CRV 2024.
- Mojtaba Naeimi, **Vishvam Porwal**, Abhinandan Roul, Ayan Biswas, Asim Biswas(2024). Soil Organic Matter Prediction from Computer Vision. Manuscript in preparation.

AWARDS AND ACHIEVEMENTS

ACM-ICPC Regionalist

2020

- A prestigious programming contest held for over 13 years. Led a team to Asia-wide level success.

Won Odyssey Hackathon

2022

- OurWavehub conducted this hackathon in Brampton, CA, and won prizes worth \$10000.

TECHNICAL SKILLS

Languages: Python, C++, SQL, NoSQL, Dart

Frameworks: PyTorch, Flutter, Flask

Developer Tools: Git, Docker, Firebase, Elasticsearch, MongoDB, GitHub Workflows

Libraries: Pandas, NumPy, Matplotlib, Scikit-learn