

Parinita Nema

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Ph.D. candidate in Data Science and Engineering at IISER Bhopal, working on **continual and incremental learning for computer vision**. My research covers class-incremental and few-shot class-incremental learning, online task-free continual learning, boundary-free incremental learning, and multimodal (audio–visual) learning, with publications at WACV, BMVC and Interspeech.

Education

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| 2022 – Present | ■ Ph.D., Data Science and Engineering
Indian Institute of Science Education and Research (IISER) Bhopal
Thesis: <i>Incremental Learning in Computer Vision</i>
Supervisor: <i>Prof. Vinod K Kurmi</i>
CPI: 8.5/10 |
| 2018 – 2020 | ■ M.Sc. Computer Science
Vikram University, Ujjain
Percentage: 82.58 |
| 2014 – 2017 | ■ B.Sc. Computer Science
Vikram University, Ujjain
Percentage: 72.30 |
| 2012 – 2014 | ■ Higher Secondary (XII)
Govt. Excellence School, Shujalpur
Percentage: 82.00 |

Research Publications

- 1 **P. Nema** and V. K. Kurmi, “Gradient-free orthogonal feature organization for online task-free class-incremental learning,” in *Proc. British Machine Vision Conference (BMVC)*, Accepted, Lancaster, UK, 2026.
- 2 R. S. Thakur, A. K. Singh, **P. Nema**, and V. K. Kurmi, “PromptCIL: Feature-guided prompting for audio-visual class-incremental learning,” *Expert Systems with Applications*, 2026, Accepted, in press.
- 3 **P. Nema** and V. K. Kurmi, “Strategic base representation learning via feature augmentations for few-shot class incremental learning,” in *Proc. IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2025, pp. 6394–6403.
- 4 R. Singh, **P. Nema**, and V. K. Kurmi, “Towards robust few-shot class incremental learning in audio classification using contrastive representation,” in *Proc. Interspeech 2024*, 2024, pp. 5023–5027.

Grants, Awards and Certifications

Research Grants

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| Aug 2026 | ■ Student Innovation Grant (SIG) 3.0 – INR 30,000, Innovation & Incubation Centre for Entrepreneurship (IICE), IISER Bhopal.
Project: <i>VaaniAdapt – A Continual Learning Platform for Multilingual Speech Recognition Across Indian Languages</i> . |
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Grants, Awards and Certifications (continued)

Awards and Achievements

- Jul 2026  **Prize, 3-Minute Research Presentation** – Symposium on Energy and AI, IISER Bhopal (25 July 2026), for *Continual Learning for Smart Building Energy Forecasting*.
- 2025  **ACM-W Scholarship Awardee** – Supported participation in *WACV 2025 (IEEE/CVF Winter Conference on Applications of Computer Vision)*.
- 2021  **NET-JRF**, Computer Science and Applications (UGC National Eligibility Test – Junior Research Fellowship).
- 2020  **Department Prize for Outstanding Student Performance**, Vikram University.

Certifications and Training

- 2023  **CVIT Summer School**, IIIT Hyderabad.
-  **SERB-Funded Karyashala Workshop** – Synergizing Healthcare Services and Affective Computing using Deep Learning, IIT Indore.
- 2021  **Udemy** – Data Science and Analytics using R Programming.
-  **Coursera** – Mathematics for Machine Learning.
- 2017 – 2018  **PGDCA** – Post Graduate Diploma in Computer Applications.

Teaching Assistantship

- Jan 2026 – May 2026  Teaching Assistant, Introduction to Programming
- Jul 2025 – Nov 2025  Teaching Assistant, Advanced Deep Learning
- Jan 2025 – May 2025  Teaching Assistant, Deep Learning
- Jul 2024 – Nov 2024  Teaching Assistant, Advanced Deep Learning
- Jan 2024 – May 2024  Teaching Assistant, Deep Learning
- Jan 2023 – May 2023  Teaching Assistant, Introduction to Programming

Projects

Research Projects

- 2026 – Present  **VaaniAdapt**: A Continual Learning Platform for Multilingual Speech Recognition Across Indian Languages.
Selected for the Student Innovation Grant (SIG) 3.0, IICE, IISER Bhopal.
- 2026  **Continual Learning for Smart Building Energy Forecasting**.
Presented at the Symposium on Energy and AI, IISER Bhopal (award-winning 3-minute presentation).

Academic Projects

- 2023  Income Prediction Analysis Using Machine Learning
-  Neural Network-based Handwritten Character Recognition using Deep Learning
- 2020  Smart Library Management System: Enhancing Libraries with Automated Resource Handling
-  Building a Reliable and User-Friendly Online Examination System
- 2017  Robust Cloud Document Collaboration Platform for Dynamic Team Environments

Skills

Programming Languages	Python, C, C++, Java, R, SQL
Deep Learning Frameworks	PyTorch, TensorFlow, Keras, Scikit-learn
Research Areas	Continual / Incremental Learning, Computer Vision, Multimodal (Audio-Visual) Learning, Transfer Learning
Tools and Platforms	L ^A T _E X, Git, LINUX, WINDOWS, Tableau, MS-Office
Web Development	HTML, CSS, JavaScript

Coursework

2024	Natural Language Processing
	Transfer Learning in Computer Vision
	Data Science in Practice
2023	Deep Learning
	Data Science and Machine Learning
	Digital Image Processing and Applications in Bioimage Analysis