

Atul Kumar

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Current Role

Ph.D. Scholar — Data Science & Engineering

2023 – Present

Indian Institute of Science Education and Research (IISER) Bhopal | CGPA: 8.83/10

Thesis: *Privacy in Machine Learning* | Supervisor: Dr. Akshay Agarwal

Education

Integrated M.Sc. in Computer Science

2018 – 2023

Central University of Rajasthan

Intermediate (Class XII)

2017

Bihar School Examination Board

Matriculation (Class X)

2014

Central Board of Secondary Education

Experience

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- Teaching Assistant in Deep Learning, IISER Bhopal Jan 2026 – Ongoing
 - Teaching Assistant in Machine Learning with Graphs, IISER Bhopal Aug 2025 – Dec 2025
 - Teaching Assistant in Applied Optimization, IISER Bhopal Jan 2025 – Apr 2025
 - Teaching Assistant in Database Management Systems, IISER Bhopal Aug 2024 – Dec 2024

Research Interests

Privacy-Preserving ML, Computer Vision, Data & Machine Unlearning, Trustworthy AI, Biometric Security, Machine Learning & Deep Learning

Publications

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- A. Kumar**, A. Agarwal, N. Ratha, *Your Face, Your Privacy: Combating Unauthorized Usage*, IEEE Int. Conf. on Automatic Face and Gesture Recognition (**FG 2025**), h5-index: 40.
 - M. RA*, **A. Kumar***, A. Agarwal, *On Which Data Distribution (Synthetic or Real) We Should Rely for Soft Biometric Classification*, IEEE/CVF Winter Conf. on Applications of Computer Vision (**WACV 2025**), h5-index: 109.
 - R. Jain, A. Agarwal, **A. Kumar**, *Deep Models Under Domain Shift: A Sketch-Based Study*, Women in Machine Learning Workshop @ **NeurIPS 2025**.
 - R. Jain, **A. Kumar**, A. Agarwal, *Semantic-Guided Sketch-to-RGB Image Generation via Controlled Diffusion for Improved Sketch Recognition* (Student Abstract), AAAI Conf. on Artificial Intelligence (**AAAI 2026**), h5-index: 232.
 - Mohit, **A. Kumar**, A. Agarwal, *Faces in the Wild: GAN-Driven Normalization for Robust Facial Recognition*, CVPR Workshop on AI for Creative Visual Content Generation, Editing and Understanding (**CVPRW 2026**), h5-index: 117.

* denotes equal author contribution.

Startup & Grants

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- GUARDMYPRIVACY Private Limited

A privacy-tech startup founded out of PhD research, focused on safeguarding personal data in AI-driven systems.
Founders: Mr. Atul Kumar, Dr. Akshay Agarwal

2. **AIC SEED Plan-E (Cohort-1)** *IISER Pune, 2025*
Inventors: Mr. Atul Kumar, Dr. Akshay Agarwal
3. **Student Innovation Grant (SIG)** *IISER Bhopal, 2025*
Inventors: Mr. Atul Kumar, Dr. Akshay Agarwal, Ms. S. Aarthi

Scientific Duty

- **Reviewer** for the following premier Computer Vision and Machine Learning venues: IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), European Conference on Computer Vision (**ECCV**), Conference on Neural Information Processing Systems (**NeurIPS**).

IPR & Patents

1. **Silent Shield: Image Perturbations that Confound AI, Not Human Eyes**
Inventors: Mr. Atul Kumar, Dr. Akshay Agarwal

Conferences & Workshops

- Attended **India AI Summit 2026**, a national platform on the future of Artificial Intelligence.
- Attended **Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP) 2025**.
- Attended and Volunteered at the **Indian Control Conference (ICC) 2024**, assisting in organizing Plenary Talks and technical sessions.

Skills

Programming	C++, Python, Java; proficient in Data Structures & Algorithms
Web Development	HTML, CSS, Django
Databases	MySQL, SQLite, DBMS concepts
AI / ML	Machine Learning, Deep Learning, Computer Vision, Transformers, GANs, Diffusion Models, Vision-Language Models (VLMs)
Big Data	Apache Hadoop, Apache Spark
Libraries / Frameworks	NumPy, Pandas, scikit-learn, Matplotlib, TensorFlow, PyTorch, OpenCV
Cloud	Google Cloud Platform (GCP)

Achievements & Honours

- Conferred the prestigious **41st Madhya Pradesh Young Scientist Award** in recognition of exceptional contributions to research and innovation.
- Honoured as the **Best Teaching Assistant** at IISER Bhopal, **2025**, acknowledged for exceptional academic mentorship and instructional support.
- Awarded **Best Poster Presentation** at DSE & Engineers' Day, IISER Bhopal, consecutively in **2024** and **2025**.
- Qualified **GATE 2024** in both **Computer Science (CS)** and **Data Science & Artificial Intelligence (DA)**.
- Qualified **UGC NET-JRF 2023**, establishing national-level eligibility for research fellowships and lectureship.

Outreach & Activities

- Volunteered in organizing the Impact Summit on Democratizing AI, IISER Bhopal, *February 2026*.
- Volunteered in organizing the Workshop on Next-Generation AI on the occasion of DSE Day, IISER Bhopal, *November 2025*.
- Volunteered in organizing Plenary Talks on Cutting-Edge Technologies & Startups on Engineers' Day, IISER Bhopal, *September 2025*.