

Research Profile

An AI researcher and university professor bridging machine learning with the humanities to address algorithmic inequality. Grounded in computer science and creative writing, I audit generative models to prevent subtle socio-cultural biases from being scaled by technology. My work aims to build inclusive, human-rights-based AI policies that foster social cohesion and protect marginalized voices globally. Also interested in gender bias, hate speech on social media. I am interested in working on intelligent tutoring systems and related AI tools for education designed to widen access across diverse learning needs and under-resourced classrooms.

Research Skills

- Programming & Frameworks:** Python, R, PyTorch, TensorFlow, OpenCV.
- AI Methods:** Transformer/BERT NLP pipelines, agentic AI systems, multi-modal learning, fine-tuning, evaluation & benchmarking.
- AI Bias & Fairness:** Bias auditing across text and image models, mitigation strategies, dataset construction, error analysis.
- Research & Writing:** Academic writing, literary theory, interdisciplinary analysis, mentorship.

Research Training, Certifications & Academic Distinctions

- 2026 **AI Transparency Conference (AITC 2026)**, COAI Research (Nuremberg, Germany). Participant. Research training in AI transparency, trust, compliance, and governance.
- 2025 **Artificial Intelligence: Ethics & Societal Challenges**, Coursera (Lund University). Analyzed ethical dimensions of AI systems, including algorithmic bias, surveillance, privacy, and democratic impact. (Verified Credential)
- 2013 **Feature Extraction: Road Network Identification from Satellite Imagery**, MNNIT Allahabad. Developed an automated segmentation system for traffic region identification.
- 2014–2016 **GATE Scholarship (Government of India)** — Fully funded M.Tech awarded through national competitive examination.

Relevant Academic and Research Experiences

Assistant Professor | UPES | Dehradun | India

- Nov 2024 – Present Taught courses on applied AI/ML, NLP, Python Programming, and data analytics, regularly handling two classes per semester, each with an average enrollment of approximately 60 students. Equipped students with hands-on, industry-relevant skills in data pipeline construction and predictive model deployment for cutting-edge applications in healthcare, social media, and education.

Assistant Professor | Parul University | Vadodara | India

- Apr 2024 – Oct 2024 Taught Design & Analysis of Algorithms and NLP courses, regularly handling two classes per semester, each with an average enrollment of approximately 65 students. Mentored undergraduates through the end-to-end development of functional chatbots for their final year projects, successfully translating algorithm theory into tangible AI applications.

Data Scientist | Sortit AI | London | UK

- Apr 2022 – Oct 2022 Served as lead developer, reporting directly to the CEO and overseeing core technical decision-making for the company. Led the design and development of a comprehensive floor plan image dataset and implemented CNN-based classification models to identify architectural elements, enabling automated cost estimation from single floor plans.

Computer Researcher (Holographer) | Basingstoke | UK

- Feb 2021 – Core member of a four-person holography research team, reporting directly to the Chief Scientist. Contributed to the development of secure holographic master plates for international clients, including Microsoft and national currencies. Engineered novel image processing techniques to improve production quality and anti-counterfeiting measures.
- Dec 2021

Software Engineer/Chief Developer | Sketchbytes Research Labs | India

- Jun 2016 – Reporting directly to the CEO, led the face detection and biometric authentication division. Implemented CNN models for medical image analysis, optimizing architectures for disease detection, bone fracture detection, and body region segmentation. Led the face detection and biometric authentication division of the company.
- Aug 2019

Teaching Assistantship | NIT Durgapur | India

- Aug 2015 – **Digital Image Processing Lab & C Programming Lab:** Assisted faculty in conducting laboratory sessions, guiding undergraduate students through complex concepts and practical implementations.
- May 2016

Volunteering

Mentor (Admissions, Career & Digital Skills) | Eklavya India Foundation | Remote

- May 2026 – Mentor aspirants from marginalised communities on admissions, career, and digital skills; provided AI learning tools (1:1 guidance, applications, and resume/profile feedback)..
- Present

Program Coordinator | Eklavya India Foundation | Remote

- Aug 2024 – Coordinated mentoring for aspirants from marginalised communities and other first-generation graduate aspirants; provided AI learning tools and academic/technical support; improved mentoring logistics and digital workflows.
- Sep 2024

Education

- 2019–2021 **Master of Arts, Creative Writing**, *University of Portsmouth*, Portsmouth, UK.

Dissertation | **Defiance of Lotus**

Composed original free-form poetry and critical studies exploring themes of nature, the pastoral, identity, hardships, resistance, discrimination, struggle, and resilience.

- 2014–2016 **MTech, Computer Science & Engineering**, *National Institute of Technology*, Durgapur.

Dissertation | **Heterogeneous Face Identification by Fusion of Local Descriptors**

Developed a computer vision model that integrates MB-LBP and MLBP feature descriptors to enhance cross-modal face recognition performance. This work included problem definition, dataset preparation, model design, and systematic evaluation through benchmarking.

- 2010–2014 **BTech, Computer Science & Technology**, *UIET, CSJM University*, Kanpur.

Dissertation | **Automatic Detection of Ribs, Blood Vessels, and Cancerous Nodules from an Anterior-posterior X-ray Radiograph**

Developed a diagnostic image processing pipeline that began with data cleaning and enhancement. Subsequent stages used Canny edge detection and adaptive thresholding to segment ribs and vascular structures, which facilitated the targeted identification of cancerous nodules.

Publications

Book Publication

- 2020 **Kunwar Pankaj Siddharth**, *The Birds of Passage: Collection of Poems*, Notion Press.

In Conference Proceedings

- 2017 **Kunwar Pankaj Siddharth, and Dakshina Ranjan Kisku**, Heterogeneous Face Identification by Fusion of Local Descriptors, *IEEE 7th International Computing Conference, IACC 2017*.

Awards

- 2011–2012 **1st Position**, C Quiz (Programming), Ignitia — Pranveer Institute of Technology, Kanpur (2012).
3rd Position, Pikkon (Photography), Techmart — UIET Kanpur (2011).