

Aditya Narendra

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Education

May 2021	Odisha University of Technology and Research	Bhubaneswar, India
May 2017	Bachelor of Technology (B.Tech) in Fashion and Apparel Technology <i>UG Thesis - Generative Models and Recommender Systems for AI-Driven Fashion</i> [🔗]	CGPA: 8.43/10

Experience

Present	Indian Institute of Technology, Indore	Indore, India
July 2025	Project Assistant Advisors: <i>Prof. Chandresh Kumar Maurya & Prof. Ayush Tripathi</i>	
	> Worked on a DST (Govt. of India)-funded project to build an end-to-end pipeline for Indic-language radiology report generation using a two-stage multimodal model framework. [🔗]	
	> Developed rank-based conformal prediction methods to improve reliability in few-shot pathological analysis pipelines. (<i>Published at AAAI'26</i>)	
	> Working on a multimodal model for automated sleep staging and sleep disorder diagnosis using EEG, ECG, and EMG signals.	
Apr 2025	Tech Mahindra	Bhubaneswar, India
Aug 2022	Associate Software Engineer Supervisor: <i>Mr. Ipsit Misra (Manager)</i>	
	> Designed a Graph Neural Network (GNN) based accident detection feature for a smart traffic solution for the Govt. of Odisha, improving emergency response time by over 60% .	
	> Reduced record retrieval time by 42% for a scalable EHR tracking application handling over 100,000+ daily records for a US-based client.	
	> Taught '401-Deep Learning' [🔗], a DL course to 50+ undergraduates from diverse academic backgrounds.	
Jan 2025	University of Cincinnati Prasath Lab	Remote
Apr 2024	Research Intern Advisor: <i>Dr. Surya Prasath</i>	
	> Worked on conformal prediction methods to enhance uncertainty quantification in pathological cell classification workflows, improving model interpretability and robustness.	
	> Designed a sampling-based feature bias mitigation technique to address data-driven biases in cervical cytology classification, improving model fairness and reliability. (<i>Published at WIML, NeurIPS'24</i>)	
Jan 2024	ETH Zürich Assisted Forest Regeneration Lab	Remote
Dec 2022	Research Affiliate Advisor: <i>Dr. Leland K Werden</i>	
	> Finetuned a Llama2-13b model for a summarization platform with custom review tags for grey literature of regeneration practices in ASReview Lab and was featured in their monthly newsletter. [🔗]	
Sept 2023	Carnegie Mellon University Xu Lab	Remote
Aug 2022	Research Intern Advisor: <i>Prof. Min Xu</i>	
	> Worked on a Contrastive Self-Supervised Learning (CSSL) approach for macromolecular structure classification from cryo-ET data with limited labels. [🔗]	
Jan 2022	International Institute of Information Technology, Hyderabad (IIIT-H)	Hyderabad, India
Jul 2021	Research Assistant Advisors: <i>Prof. Jayanthi Sivaswamy & Prof. C.V. Jawahar</i>	
	> Worked on multi-scale attention architecture for COVID-19 detection from Chest-X Rays.	
	> Assisted in designing a sub-cortical structure segmentation database for young population [🔗].	

Publications

*= equal contribution

P1: Towards Reliable Few-Shot Adaptation of Pathology Foundation Models via Conformal Prediction [PDF]

Aditya Narendra, Subhankar Panda & Chandresh Kumar Maurya
40th AAAI Conference on Artificial Intelligence-2026

[AAAI]

P2: UrHiOdSynth: A Multilingual Synthetic Corpus for Speech-to-Speech Translation in Low-Resource Indic Languages [PDF]
Jamaluddin, Subhankar Panda, Aditya Narendra, Kamanksha Prasad Dubey & Mohammad Nadeem
LoResLM Workshop, Conference of the European Chapter of the Association for Computational Linguistics (EACL)-2026 [Under Review]

P3: Optimizing Conformal Prediction Sets for Pathological Image Classification [PDF]
Shubham Ojha*, Aditya Narendra*, Abhay Kshirsagar, Shyam Sundar Debsarkar & Surya Prasath
Pattern Recognition (Impact Factor: 7.6) [Under Review]

P4: Ensuring Class-Conditional Coverage for Pathological Workflows [PDF]
Siddharth Narendra, Shubham Ojha, Aditya Narendra, Abhay Kshirsagar & Abhisek Mallick
39th AAAI Conference on Artificial Intelligence-2025 [AAAI]

P5: Mitigating Feature Bias in DL Models for Cervical Cytology [PDF]
Subhashree Sahu, Shubham Ojha & Aditya Narendra
WIML Workshop, Neural Information Processing Systems-2024 [NeurIPS-W]

P6: Uncertainty Quantification in DL Models for Cervical Cytology [PDF]
Shubham Ojha & Aditya Narendra
Medical Imaging with Deep Learning-2024 [MIDL]

Select Projects

Prediction of Future Continuous Motion States from ECoG Recordings [Q] [Slides] Jul 2023 - Aug 2023
Advisor: *Dr. José Biurrun Manresa*
> Participated in the 2023 Neuromatch Academy Summer School on Computational Neuroscience [Q].
> Designed regression models for future motion state prediction using time series analysis on ECoG data. [Notes]

MoSwasthya: ML Based Application for Cardiac Disease Risk Prediction [Q] [V] [Slides] Nov 2022 - Dec 2022
Advisor: *Mr. Ipsit Misra*
> Created an all-in-one application that provides an ensemble method-based FAPS (First Action Prediction System) that estimates the risk of cardiac disease using non-medical inputs with an accuracy of 91.24%.
> This application also provides user-health analytics and details of healthcare facilities based on user location.

Weakly Supervised Segmentation Techniques for Cardiac Diseases Diagnosis [Q] Jul 2022 - Aug 2022
Advisors: *Prof. Thomas Grenier & Prof. Pierre-Marc Jodoin*
> Participated in the 3rd Edition Summer School on Deep Learning for Medical Imaging (DLMI-22) at ETS Montreal.
> Evaluated various weakly supervised segmentation techniques for cardiac diseases diagnosis. [Q]

Skills & Research Interests

Languages: Python, C, C++, HTML/CSS

Frameworks: PyTorch, Tensorflow, JAX

Misc.: Git, Linux, L^AT_EX, QGIS

Research Interests: Uncertainty Quantification, Biomedical Image Analysis & Multimodal Models

Relevant Coursework

Classroom (w/Subject Code): Calculus [I-III] (PAM1A001), Linear Algebra (PAT2A001), Introduction to Statistics & Probability (PMA4E001), Data Structures & Algorithms (PCL1B201), Database Systems (PCL2B201)

Online (w/Marksheet & Certificates): Introduction to Algorithms and Analysis (IIT-KGP), Computer Graphics (IIT-G), DataBase Management System (IIT-KGP), Computer Architecture (IIT-M), Deep Learning Specialization (DeepLearning.AI), Machine Learning (Coursera), 6.431x: Probability- The Science of Uncertainty and Data (MITx).

Awards

2022 Smart Odisha Hackathon: Awarded **1st Prize** out of 1000 teams **worth \$2500** by the Government of Odisha [Q].

2022 Hugging Face Gradio NYC Hackathon: Awarded **2nd prize** out of 100 teams **worth \$200** by Hugging Face [Q].

OUTR Merit Scholarship: Received tuition scholarships for ranking **1st in the department** during 3rd and 4th UG years.