

# Aditya Narendra

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## Education

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

## Experience

Present	<b>Indian Institute of Technology, Indore</b>	<b>Indore, India</b>
July 2025	Project Assistant   Advisors: <a href="#">Prof. Chandresh Kumar Maurya</a> & <a href="#">Prof. Ayush Tripathi</a> <ul style="list-style-type: none"><li>&gt; 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. [🔗]</li><li>&gt; Developed rank-based conformal prediction methods to improve reliability in few-shot pathological analysis pipelines. (Published at AAAI'26)</li><li>&gt; Working on a multimodal model for automated sleep staging and sleep disorder diagnosis using EEG, ECG, and EMG signals.</li></ul>	
Apr 2025	<b>Tech Mahindra</b>	<b>Bhubaneswar, India</b>
Aug 2022	Associate Software Engineer   Supervisor: <a href="#">Mr. Ipsit Misra (Manager)</a> <ul style="list-style-type: none"><li>&gt; 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%.</li><li>&gt; Reduced record retrieval time by 42% for a scalable EHR tracking application handling over 100,000+ daily records for a US-based client.</li><li>&gt; Taught '401-Deep Learning' [🔗], a DL course to 50+ undergraduates from diverse academic backgrounds.</li></ul>	
Jan 2025	<b>University of Cincinnati   Prasath Lab</b>	<b>Remote</b>
Apr 2024	Research Intern   Advisor: <a href="#">Dr. Surya Prasath</a> <ul style="list-style-type: none"><li>&gt; Worked on conformal prediction methods to enhance uncertainty quantification in pathological cell classification workflows, improving model interpretability and robustness.</li><li>&gt; Designed a sampling-based feature bias mitigation technique to address data-driven biases in cervical cytology classification, improving model fairness and reliability. (Published at WIML, NeurIPS'24)</li></ul>	
Jan 2024	<b>ETH Zürich   Assisted Forest Regeneration Lab</b>	<b>Remote</b>
Dec 2022	Research Affiliate   Advisor: <a href="#">Dr. Leland K Werden</a> <ul style="list-style-type: none"><li>&gt; 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. [🔗]</li></ul>	
Sept 2023	<b>Carnegie Mellon University   Xu Lab</b>	<b>Remote</b>
Aug 2022	Research Intern   Advisor: <a href="#">Prof. Min Xu</a> <ul style="list-style-type: none"><li>&gt; Worked on a Contrastive Self-Supervised Learning (CSSL) approach for macromolecular structure classification from cryo-ET data with limited labels. [🔗]</li></ul>	
Jan 2022	<b>International Institute of Information Technology, Hyderabad (IIIT-H)</b>	<b>Hyderabad, India</b>
Jul 2021	Research Assistant   Advisors: <a href="#">Prof. Jayanthi Sivaswamy</a> & <a href="#">Prof. C.V. Jawahar</a> <ul style="list-style-type: none"><li>&gt; Worked on multi-scale attention architecture for COVID-19 detection from Chest-X Rays.</li><li>&gt; Assisted in designing a sub-cortical structure segmentation database for young population [🔗].</li></ul>	

## 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

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- Prediction of Future Continuous Motion States from ECoG Recordings** [🔗] [Slides] Jul 2023 - Aug 2023  
Advisor: [Dr. José Biurrun Manresa](#)  
> Participated in the 2023 Neuromatch Academy Summer School on Computational Neuroscience [🔗].  
> 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** [🔗] [📺] [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** [🔗] 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. [🔗]

## Skills & Research Interests

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

**Frameworks:** PyTorch, Tensorflow, JAX

**Misc.:** Git, Linux,  $\text{\LaTeX}$ , QGIS

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

## Relevant Coursework

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**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

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

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

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