

Aditya Narendra

🌐 adinarendra098.github.io 📞 +91-7608-054-054 in linkedin.com/in/adityanarendra
@ adinarendra0108@gmail.com 🐙 github.com/AdiNarendra98

Education

May 2017	Odisha University of Technology and Research (OUTR)	Bhubaneswar, Odisha
May 2021	Bachelor of Technology (B.Tech) in Fashion and Apparel Technology <i>Undergraduate Thesis - Applications of Artificial Intelligence in Fashion Industry</i> [🔗] Courses - Data Structures, Algorithms, Machine Learning, Linear Algebra, Calculus, Probability & Statistics	CGPA: 8.43/10

Experience

Dec 2022	ETH Zürich Assisted Forest Regeneration Lab [🔗]	Zurich, Switzerland
Present	<i>Research Affiliate Advisor: Dr. Leland Werden</i> <ul style="list-style-type: none">> Working on a project on quantification of potential carbon capture and plant biodiversity recovery of forest, savannah, and mangrove assisted restoration projects.> Currently analyzing data related to regeneration practices and creating data pipelines.> Built a transformer based model for summarization of grey literature regarding regeneration practices.	
Jul 2023	Neuromatch Academy [🔗]	Remote
Aug 2023	<i>Research Volunteer Advisors: Dr. José Biurrun Manresa & Dr. Xi-He Xie</i> <ul style="list-style-type: none">> Participated in the 2023 Summer School on Computational Neuroscience.> Worked on 'Prediction of Future Continuous Motion States from ECoG Recordings' based on joystick tracking data. [🔗] [Slides] [Notes]	
Aug 2022	Center of Excellence - Artificial Intelligence [🔗] Tech Mahindra [🔗]	Bhubaneswar, India
Oct 2023	<i>Associate Researcher Advisors: Prof. Jibitesh Mishra & Ipsit Misra</i> <ul style="list-style-type: none">> Developed robust and interpretable deep learning models for applications such as smart traffic systems and healthcare.> Taught '401-Deep Learning' [🔗] an introductory DL course to 50+ undergrads from various backgrounds.> Published 3 research papers and 1 Patent at international conferences and journals.	
Aug 2022	Carnegie Mellon University Xu Lab [🔗]	Pittsburgh, USA
Sept 2023	<i>Research Intern Advisor: Prof. Min Xu</i> <ul style="list-style-type: none">> Built an end-to-end multimodal model for particle picking and subtomogram alignment.> Also worked on modeling continuous conformational changes in cryo-ET images with self-supervised representation learning. [🔗]	
Jul 2022	École de Technologie Supérieure (ÉTS Montreal)	Montreal, Canada
Aug 2022	<i>Summer School Research Intern Advisors: Prof. Thomas Grenier & Prof. Pierre-Marc Jodoin</i> <ul style="list-style-type: none">> Participated in 2022 Summer school on Deep Learning for Medical Imaging (3rd Edition). [🔗]> Worked on benchmarking various weakly supervised segmentation techniques for cardiac diseases diagnosis. [🔗]	
Jul 2021	International Institute of Information Technology, Hyderabad (IIIT-H) [🔗]	Hyderabad, India
Jan 2022	<i>Research Intern Advisor: Prof. Jayanthi Sivaswamy & Prof. C.V. Jawahar</i> <ul style="list-style-type: none">> Worked on an attention-based model for Covid-19 detection from Chest-X Rays.> Created a database for the segmentation of sub-cortical structures from MRI scans of youths.	

Skills

Languages: C, C++, Python

Frameworks: Tensorflow, PyTorch, Keras, REST API

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

Research Interests

AI for Social Good

Trustworthy Machine Learning

Human-AI Interaction

Publications

Deep Learning Based Classification of the Big Four Snake Species Using Visual Features [[Paper](#)] [[Slides](#)] [[🔗](#)]
Nishikanta Parida, Aditya Narendra, Pooja Reddy Kolimi, Priyansu Panda & Ipsit Misra
14th IEEE International Conference on Cloud Computing, Data Science & Engineering, India [Confluence '24]

From Robots to Books: An Introduction to Smart Applications of AI in Education (AIED) [[Paper](#)] [[Slides](#)]
Shubham Ojha, Siddharth Mohapatra, Aditya Narendra & Ipsit Misra
Springer International Conference on Recent Innovations in Computing, Hungary [ICRIC '23]

Chaurah: Smart Raspberry-Pi Parking System [[Paper](#)] [[Slides](#)] [[🔗](#)]
Soumya Ranjan Choudhary, Aditya Narendra, Ashutosh Mishra & Ipsit Misra
International Conference on Communication and Computational Techniques, India [ICCCT '23]

Patents

AI-Based Emergency Healthcare Solution (Patent No- 202331002146) [[🔗](#)] [India Patents Office]
Ipsit Misra, Jibitesh Mishra, Aditya Narendra & Khirod Behera
[Published and Under Examination]

Select Projects

Satellite Data-based Pollution Forecasting using CNNs [[🔗](#)] Jan 2023 - Apr 2023
Advisor: [Prof. Jibitesh Mishra](#)

- > Built a CNN-based model to predict Breezometer Air Quality Index (BAQI) using Sentinel-2 images achieving over **87%** accuracy matching existing industry models. [[Paper In Preparation](#)]
- > Created a dataset of over 10,000 satellite images at resolution 1280 x 1280 and 10,000 Breezometer air quality data records across 57 cities in India.

MoSwasthya: ML Based Application for Cardiac Disease Risk Prediction [[🔗](#)] [[📺](#)] [[Slides](#)] Nov 2022 - Dec 2022
Advisor: [Ipsit Misra](#)

- > Created an all-in-one application that provides an Ensemble Method based FAPS (First Action Prediction System) which estimate the cardiac disease risk on non-medical inputs with a real-day accuracy of **91.24%**.
- > This application also provides user-health analytics and details of healthcare facilities based on user location.

Vision-Based Models for Sorting and Segregation of Waste [[🔗](#)] [[Slides](#)] July 2022 - Aug 2022
Associated Organization: [Omdena](#)

- > Worked as a Junior ML Engineer on state-of-art CNN techniques for segregation and sorting of waste/trash into 10 commonly occurring classes as a task lead for the model-building team. [[🔗](#)]
- > Evaluated this approach on benchmark datasets demonstrating matching accuracies of over **97%** in most cases.
- > Worked as a co-task lead for the deployment of the application using the Hugging Faces-Gradio Framework.

CoughVid: Covid-19 Detection from Cough Voice Samples [[🔗](#)] Feb 2021 - Jan 2021
Advisor: [Prof. S Behera](#)

- > Developed an RNN and MFCC feature-extraction based model to detect Covid-19 from coughing audio samples.
- > Obtained an overall accuracy of **82.42%** in Pfizer Digital Medicine Challenge.

Honors and Awards

2022 Smart Odisha Hackathon: Awarded **1st Prize worth 2500\$ USD** by the Chief Minister of Odisha for Healthcare sector out of 1000 teams nationwide [[🔗](#)].

Hugging Face Gradio NYC Hackathon: Ranked **2** out of 100 participating teams and won **200\$ USD** worth of Hugging Face store goodies [[🔗](#)].

OUTR Merit Scholarship: Secured academic scholarships for **ranking 1st** in the department over the last two undergrad years.

OUTR Best Thesis Award: Received nomination for my thesis among 1200+ students in 2021 undergraduate batch.