Aditya **Narendra**

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

Education

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

Experience

Dec 2022 – Present
ETH Zürich | Assisted Forest Regeneration Lab [] — **Zurich, Switzerland**
Research Affiliate | Advisor: Dr. Leland Werden
- Working on a project on quantification of potential carbon capture and plant biodiversity recovery of forest, savannah, and mangrove assisted restoration projects.
- Built a transformer based model with custom review tags for summarizing grey literature of regeneration practices in ASReview Lab and was featured in their monthly newsletter. []

Aug 2022 – Oct 2023
Tech Mahindra [] **| Center of Excellence-Artificial Intelligence** [] — **Bhubaneswar, India**
Associate Researcher | Advisors: Prof. Jibitesh Mishra & Ipsit Misra (Lab Director)
- Led a project on developing robust deep learning models for smart traffic management systems.
- Developed data analysis pipelines and experimentation workflows for ML systems, applied in employee management and healthcare domains.
- Taught '*401-Deep Learning*' [] an introductory DL course to 50+ undergrads from various backgrounds.

Aug 2022 – Sept 2023
Carnegie Mellon University | Xu Lab [] — **Pittsburgh, USA**
Research Intern | Advisor: Prof. Min Xu
- Built an unsupervised clustering-based model for structural pattern mining of Cryo-ET data. []
- Also worked on modeling continuous conformational changes in cryo-ET images with self-supervised representation learning.

Jul 2022 – Aug 2022
Omdena | India Chapter [] — **Bengaluru, India**
Junior Machine Learning Engineer | Mentor: Muhammad Yahiya (Chapter Lead)
- Led a team for building CNN based models for segregation and sorting of waste materials. [] []
- Evaluated this approach on benchmark datasets demonstrating matching accuracies of over 97% and deployed it on Hugging Face-Gradio framework. [**Slides**]

Jan 2022 – April 2022
iNeuron.ai [] — **Bengaluru, India**
Data Science Intern | Mentor: Sudhanshu Kumar (CEO)
- Developed an ensemble method based cardiac disease classification model and designed a data visualization dashboard using medical records. []
- Performed competitor analysis & formulated data strategies to create a business model for the system.

Jul 2021 – Jan 2022
International Institute of Information Technology, Hyderabad (IIIT-H) [] — **Hyderabad, India**
Research Intern | Advisor: Prof. Jayanthi Sivaswamy & Prof. C.V. Jawahar
- 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, LaTeX, 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: A Smart Raspberry Pi based Parking System [Paper] [Slides] []
Soumya Ranjan Choudhaury, 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

Prediction of Future Continuous Motion States from ECoG Recordings [] [Slides] **July 2023 - Aug 2023**
Advisors: Dr. José Biurrun Manresa & Dr. Xi-He Xie

> 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: 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.
> Awarded 1st prize at 2022 Smart Odisha Hackathon in the healthcare sector.

Weakly-Supervised Segmentation Techniques for MRI Scans [] **July 2022 - Aug 2022**
Advisors: Prof. Thomas Grenier & Prof. Pierre-Marc Jodoin

> Received a full ride grant to the **2022 Summer School on Deep Learning for Medical Imaging (3rd Edition)**.
> Developed weakly supervised models for segmentation of cardiac MRI scans and evaluated them on benchmarking datasets with a top-5 accuracy of 94.86%.

Awards

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 [] .

2022 DLMI Summer School: Received a **full-ride grant** to attend the DLMI summer school at ÉTS Montreal [] .

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

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

Service

401-Deep Learining | Head Instructor: Taught an introductory DL course [] to over 50 participants at COE-AI Lab .

OUTR Outreach Commitee | Member: Facilitated sessions and bootcamps to promote undergraduate research and provide STEM education to underprivileged students.

Departmental Mentorship Program | Mentor: Worked for over 2 years as an mentor to assist first-year undergraduates.