Ankan Deria

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linkedin.com/in/ankan-deria-7a8913229 github.com/ankan8145 Portfolio

Work

Jio Institute **July 2024– Present**
Researcher in Computer Vision Medical Imaging Lab *Navi Mumbai, Maharashtra*

- Conducting research in computer vision and multimodal learning, with a focus on diffusion modeling, vision-language modeling, segmentation, LLMs, RAG, and generative modeling.

IIT Patna **Jan 2024– Feb 2024**
Research Intern in Finance Lab *Remote*

- Developing a multi-task model to predict sentiment and emotion class of user comments on financial products. Implementing generative AI techniques to identify the cause behind each comment.

Jio Institute **July 2023– Oct 2023**
Research Intern in Computer Vision Medical Imaging Lab *Navi Mumbai, Maharashtra*

- **Medical Report Generation Model:** Developed a medical report generation model from X-ray images, emphasizing memory efficiency and high performance. Effectively bridged the modality gap between encoder and decoder.
- **Medical Image Segmentation:** Build a Generalized Multi-Modal Multi-Organ Network for Precise Segmentation of Medical Images. Here, we incorporate attention gates via skip connections between each encoding and decoding block and robust encoding blocks that help the model concentrate on specific regions of interest.

Calcutta University **Mar 2023– Jun 2023**
Research Intern in Data Science Lab *Kolkata, West Bengal*

- **Modify Character BERT structure:** Modify the architecture to boost accuracy in the URL Classification Dataset. Applied ML and DL techniques for URL classification, conducting a comprehensive comparison of model accuracy.
- **Cyrillic URL Classification:** Pioneered the classification of Cyrillic URLs, breaking new ground in the field of cybersecurity.

Omdena **Dec 2022– Aug 2023**
Chapter Lead *Remote*

- **Text Summarization Tool:** Built a text summarization tool to combat information overload by leading the entire team and successfully developing a sequential language model for text summarization. **GitHub Link**
- **Hateful and Offensive Language Detection:** Developed data pipelines to ingest, process, and clean data in preparation for machine learning applications. **GitHub Link**
- **Job Recommendation System:** Developed a job recommendation system that considers user skills, suggests necessary skills for specific job roles, and provides curated YouTube resources for acquiring those skills. **GitHub Link**

Education

Government College of Engineering and Leather Technology **Jul 2020 – Jul 2024**
B Tech, Computer Science and Engineering, Kolkata, India, CGPA- 9.26

Chandrakona Road Saradamoyee High School **Mar 2018 – Mar 2020**
12th, Science(WBCHSE Board), West Bengal, India, Percentage- 94

Publications

Paper: MVLA-MedRAG: Enhancing Radiology Report Generation with Multi-Vision Encoders and Label-Augmented Retrieval
Authors: **Ankan Deria**, Tanushree Meena, Dwarikanath Mahapatra, Behzad Bozorgtabar, Sudipta Roy
Conference: Paper submitted to IEEE TMI, Year: 2025

Paper: LDMP Net: Learnable Distance Metric Prototypical Network for Few-Shot Spine Disorder Classification
Authors: Tanushree Meena, Debojyoti Pal, **Ankan Deria**, Kalyan Tadepalli, Dwarikanath Mahapatra, Behzad Bozorgtabar, Sudipta Roy
Conference: Paper submitted to IEEE TETCI, Year: 2025

Paper: L-DNA: Language-Driven Noise Addition for Image Colorization with Rescaled Diffusion Schedules
Authors: **Ankan Deria**, Snehashis Chakraborty, Dwarikanath Mahapatra, Behzad Bozorgtabar, Sudipta Roy
Conference: Paper submitted to IJCAI 2025, Year: 2025

Paper: InVERGe: Intelligent Visual Encoder for Bridging Modalities in Report Generation
Authors: **Ankan Deria**, Komal Kumar, Snehashis Chakraborty, Dwarikanath Mahapatra, Sudipta Roy
Conference: CVPRW 2024; Year: 2024; GitHub: link to GitHub

Paper: Precise Medical Image Segmentation by Learning Robust Semantic Representations
Authors: Snehashis Chakraborty, Komal Kumar, **Ankan Deria**, Dwarikanath Mahapatra, Behzad Bozorgtabar, Sudipta Roy
Journal: Paper Submitted to AI In Medicine, Year: 2024

Paper: Dual Selective Attention Model for Sentiment and Emotion Identification with Explainable Cause Generation
Authors: **Ankan Deria**, Snehashish Dey , Debayan Ganguly
Conference: Paper accepted to COMSYS-2024; Year: 2024; GitHub: link to GitHub

Paper: Cyrillic URL-A Malicious Website Classification using Deep Neural Network
Authors: Mainak Sen, **Ankan Deria**, Soumitra Chatterjee, Snehasish Dey,Debayan Ganguly, Amlan Chakrabarti
Conference: ICDEC 2024; Year: 2024; GitHub: link to GitHub

Hackathons Won

COMSYS Hackathon IIT Mandi | 10th **2023**
- Developed a predictive model for player price based on historical stats and a text emotion classification solution.

Intra-College Coding Compition | First **2022**
- Secured the top position in five intra-college coding competitions hosted by Capsulelabs, demonstrating proficiency by successfully solving eight coding problems in each competition.

Notable Github Projects

Medical Report Generation
- Develop a website for medical report generation. Visit Huggingface Preview

Player Scores Prediction
- Developed a predictive model for player scores by analyzing key factors such as runs, wickets, and match statistics. Incorporated data from both home and abroad matches, considered opponent teams, and factored in pitch conditions to enhance accuracy.

Personal Portfolio Web App
Image Cartoonification Web App
- Developed a Python-based model for converting images to cartoons and deployed it using Flask.

Achievements

- Received a job offer from TCS Company for the role of Systems Engineer at Grade C1 (Digital Role).
- Selected in Amazon Summar School Competition, 2022
- Secure 69th rank in Amazon ML Challenge Competition, 2023
- Omdena Kolkata Chapter Lead
- Codechef 3 star coder

Skills Summary

Languages: Python, LaTeX, C, C++, SQL

Frameworks and Tools: ML/DL frameworks, CV, NLP, RAG systems, Vector Database(Pinecone and QDrant), Vector Search, Document preprocessing & Pipeline, ML model deployment, LLM Finetuning, Docker, Gradio

Tools: Excel, Tableau

Soft Skills: Public Speaking, Time Management, Concentrated, Goal Oriented, Self-Motivated