Debasish Dhal

+91 8917548570 Mail GitHub Website LinkedIn Medium

Education

National Institute of Science Education and Research, Bhubaneswar August 2017-May 2023
Master of Science in Physics, with a minor in Mathematics *CGPA: 6.96/10.0*

National Institute of Technology, Rourkela **(Voluntarily opted out after one year)** 2016-2017
Bachelors of Technology in Chemical Engineering *CGPA: 7.97/10.0*

Ravenshaw Junior College, Cuttack 2014-2016
Higher Secondary Education in Science *Percentage: 87.33%*

Relevant Coursework

Courses: Computational Physics Lab, Programing and Data Structures Lab-1 (and Lab-2), Computing Laboratory-1 (and 2), Engineering Drawing, SQL for Data Science
Achievements: i) AIR 9973, in JEE Advanced 2016, in my first attempt. ii) Top 93.53 % in CAT 2023.

Skills

Languages: Python, JavaScript, TypeScript, HTML/CSS, FORTRAN, C/C++, MATLAB
Database: MySQL, PostgreSQL
Tools: Git/GitHub, Power BI, Apache PySpark, Origin, Mathematica, ImageJ, JIRA, Linux, LaTeX
Skills: Data analytics, Machine learning, Data visualization, Scientific programing, Model building and Fine-tuning

Projects, Internships and Workshops

Master's Thesis (GitHub) | *Python, Machine Learning, FORTRAN, Remote Sever* June 2022 - June 2023

- Developed and fine-tuned ML models to predict cloud parameters i.e. Cloudy/Clear discrimination, Cloud top height and Cloud total thickness, from radiometric data of INSAT-3DR satellite
- Collocated over 5 TB of data from INSAT-3DR and CLOUDSAT to generate a dataset relating cloud parameters (cloud presence, type, base height and top height) to radiometric data
- Analyzed CLOUDSAT data to study cloud height, distribution of clouds as a function of latitude and cloud distribution over land and ocean. Equivalent time-series analyses were also conducted alongside
- Developed pipelines to use developed models to generate our own maps for cloud parameters

Fine-Tuning LLMs for Indic languages | *Python, HuggingFace, API, Large File Handling* June 2023 - August 2023

- Internship with OdiaGenAI organization, where I fine-tuned LLMs and prepared datasets for fine-tuning
- Participated in Workshop on Asian Translation 2023. Fine-tuned LLMs for Hindi, Bengali and Malayalam
- Co-authored two papers paper 1 & paper 2 on end-to-end LLM fine-tuning for Indic languages
- Prepared and processed various datasets for LLM fine-tuning, for example English roleplay and Hindi roleplay
- Presented at Odias in AI ML Conference 2023 (view), as part of Team OdiaGenAI
- Presented at Generative AI and LLM workshop in two sessions (view)

Journey of Meteorological Instrumentation System February 2023

- Workshop organized by SAMEER, IIT Bombay
- Attended a series of lectures from prominent Indian scientists on meteorological on clouds and weather forecasting

Transliteration Project (HuggingFace)| *Python, HuggingFace, API* 2023

- Application to help people with pronunciation in various languages like Polish, Hungarian, Turkish etc.

Extracurricular Activities

Freelancer at Upwork | *Services in Data Analytics*
Completed one job on optimizing an implementation of simulated annealing algorithm (View)

Language and History Enthusiast
I can read a total of 8 distinct scripts namely Odia, Devanagari, Roman, Cyrillic, Kannada, Tamil, Bengali etc
My articles related to history can be found on my Medium profile