

ANANDU N R

VS Hall of Residence, IIT Kharagpur, West Bengal, India 721302

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Education

Indian Institute of Technology Kharagpur

Dec'20 – May'25

Dual Degree - Civil Engineering

CGPA: 8.75/10

Internships

Mitacs Globalink Research Internship | *INRS Quebec, Canada*

May'24 - Aug'24

- Implemented Frequency-tuned Saliency detection on **VV**, **VH** log-ratios of **Sentinel-1** imagery to identify features
- Attained 73% accuracy in burnt area segmentation using **Fuzzy C-Means clustering** on VV and VH log-ratio saliency
- Obtained **77%** and **72%** accuracy in segmentation using **dNBR** and **dNDVI** from cloud-masked **Sentinel-2** imagery
- Optimized overall accuracy to **79%** by combining dNBR, dNDVI, VV log ratio, and VH log ratio in a **U-Net** model

Data Analyst Intern | *Quantacus.ai*

Jan'24 - Feb'24

- Tracked and analyzed **10+** YouTube KPIs using advanced **SQL** and **BigQuery** across **100+** video records
- Automated data transformation pipelines, resulting in a **40%** improvement in reporting speed for cross-functional teams
- Identified audience trends and insights through product analytics contributing to a **25%** increase in viewer engagement

Data Science Intern | *University of Connecticut, USA*

Sep'23 - Nov'23

- Designed an artificial neural network model for prediction using **NLP** techniques like **tokenization** and **TF-IDF**
- Conducted sentiment analysis on company reviews from **1000+** individuals for feature extraction, model enhancement
- Implemented gradient-boosting algorithms (**XGBoost**, **CatBoost**) instead of ANN, boosting performance by **25%**
- Achieved over **82%** accuracy using KPIs including confusion matrix, ROC curves, and heatmaps to assess performance

Projects

Air quality forecasting | *IIT Kharagpur* | *Prof. Shubha Verma*

Sep'24 - May'25

- Executed preprocessing of **3** years of CPCB data, including outlier removal, time-series formatting for increased quality
- Developed a hybrid model with XGBoost and **MLP**, improving PM2.5 forecast accuracy by **3%** over standalone models
- Enhanced **R²** from **0.92** to **0.97** using XGBoost over MLP for chemical prediction; identified OC as the key pollutant

Maternal and Child health monitoring | *Stanford University* | *Prof. Pascal Geldsetzer*

May'23 - Aug'23

- Boosted data collection efficiency 50-fold and cut costs by **95%** to enhance death registration reliability in **LMICs**
- Improved feature selection by **98%** using **Random Forest Regression** and **PCA** for faster model performance
- Forecasted **six** MCH indicators with a mean column RMSE of **11.81** using **MLP** in low and middle-income countries

Skills and Expertise

Languages and Softwares: Python | SQL | C++ | MATLAB | MySQL | GEE | Hive | VS Code | MS Excel | Tableau

Libraries and Frameworks: Numpy | Pandas | Sklearn | Matplotlib | Seaborn | NLTK | PyTorch | Tensorflow | LangChain

Position of Responsibility

Athletics Team Captain | *VS Hall, IIT Kharagpur*

Feb'23 - May'25

- Delivered exceptional leadership, resulting in **1st ever gold medal victory** for VS Hall in the Inter-Hall competition
- Liaised team requirements with precision, managing a budget of **INR 55,000** to strategically enhance hall inventories
- Spearheaded over **50** structured practice sessions that led to a **15%** increase in speed times among participants
- Led over **10** interactive sessions and **5** engaging events to foster strong team bonding and promote team growth

Awards and Achievements

- Won **Athletics Excellence Award** in a batch of **1600+** students for best performance in the year **2024-2025**
- Secured **5 gold medals** in 57th Inter-IIT sports and Games and 2 medals in **West Bengal State Athletics Meet**
- Selected for the **Mitacs Globalink Research Internship 2024**, with a **5%** selection rate for international students
- Earned **6th** position in Kaggle's Maternal and Child Health Indicators prediction organized by **Stanford University**

Extracurricular Activities

- Case Study:** Engineered a sustainable and efficient **4-year** real estate project plan for **Godrej Properties Limited**
- Sports:** Competed at **State level tournament** in Athletics for IIT Kharagpur in **100m** qualifying for the finals
- Tech:** Analyzed data patterns and trends while collaborating with a **10-membered** inter hall **Data Analytics** team
- Volunteer:** Guided 12th-grade students on mathematics concepts during a **6-month** program with **Photomath**