Pratyush Pradhan

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Education

National Institute of Technology, Rourkela **November 2022 - June 2026**
Bachelor of Technology in Mining Engineering *Odisha, India*

Experience

MinePortal | *Data Scientist* | Remote | **Mar 2024-May 2024**

- Collaborated with a **4-member team** from Anatech Global Consultancy and Mine Portal to analyze KPI data of shovels and dumpers generated by **the Fleet Management System**, focusing on shovel and dumper cycle time analysis to enhance **operational efficiency by 10%.**
- Engineered and **Fine-tuned Regression models** tailored to the specific nuances of the fuel consumption data. Through rigorous testing and refinement, these models demonstrated strong **Predictive accuracy**, with a coefficient of determination of 77% , accurately capturing and forecasting fuel consumption patterns with precision.
- By leveraging insights, achieved a notable **10% reduction in specific fuel consumption** for shovels and dumpers. This highlights the effectiveness of a cohesive, data-driven approach in complex operational environments.

Relevant Courses

Machine Learning
Deep Learning
Data Structures and Algorithm
Natural language processing
DBMS

Technical Skills

Programming Languages: Python,C++
Frameworks:Pandas, NumPy , Scikit-learn, TensorFlow, Keras
Database Management: SQL
Tools:Git , GitHub

Projects

Project Goemotion | *Tensorflow, NLTK, Pandas, Scikit-learn* | Link **Aug 2024**

* **Formulated** and implemented a **text classification model** using the RoBERTa architecture, including preprocessing steps such as tokenization, stopword removal, and lemmatization, to predict emotions in the GoEmotions dataset, leading to a cleaner and more accurate dataset.
* Trained the model on a dataset of 58,000 samples, achieving an accuracy of 92% on the validation set. Optimized model performance by fine-tuning hyperparameters, reducing training time by 15% while maintaining accuracy.
* Evaluated model performance using precision, recall, and F1-score, achieving an F1-score of 0.89.

Project Glopix | *Tensorflow , Next.js , Tailwind CSS , Auth0 , MongoDB* | Link **Mar 2024**

* Engineered **real-time analysis solutions** for surveillance and autonomous vehicles, significantly enhancing instant image processing capabilities and implementing advanced deep learning algorithms in Glopix to reduce inference time to 1 minute and boost efficiency.
* Optimized a MIRNet-based **low-light enhancement model** by converting it to TFLite for reduced CPU inference time, and Streamlined resizing techniques for faster and more accurate processing.

Project Cosmopolitan | *Next.js,Tailwind CSS* | Link **Jan 2024**

* **Collaborated** as a technical member of the team which built the highly **Engaging** website of the multi-ethinic fest Cosmoplitian of NIT Rourkela.
* **Developed** and crafted numerous features while enhancing existing ones through remodeling.

Achievements

* **Selected participant** for **Amazon ML Summer School 2024**, demonstrating exceptional aptitude in machine learning and deep learning, and trained intensively for 4 weeks.
* **Finalist** in HackNITR 5.0 Hackathon (top 12 out of 3000) Certificate

Extracurricular

Lead Organiser | *Sep 2023* | **HackOdisha3.0**

- Led the publicity team and collaborated with 60+ college communities of India and 5+ International student-led organizations .