



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2024	M.TECH	IIT Kharagpur	9.29 / 10
2021	B.TECH- Civil Engineering	Government College of Engineering, Amravati	7.93 / 10
2017	HSC	Maharashtra State Board	91.08%
2015	SSC	Maharashtra State Board	93.40%

INTERNSHIPS

- Data Science Intern | Space Applications Centre, ISRO | Ahmedabad [May'23 - Jul'23]**
- Developed a model for Satellite and Model oceanic current **Data Validation** with in-situ drifter data from **Eight** large datasets
 - Worked on **Linux Server** associated with **High Performance Computer** to calculate **Correlation Coefficient** and **RMSE**
 - Performed the **yearly** and **monthly analysis** for the year 2020 for Indian Ocean, Arabian Sea, Bay of Bengal and Equatorial IO

PROJECTS

- Iceberg Detection from Satellite Imagery | M.Tech. Project | Prof. Pranab Deb [Jan'23 - Present]**
- Employing various **CNN** architectures for the **binary classification** task to classify whether the image has an iceberg or not
 - Using various Satellite Image Data for the purpose like Sentinel-1 Synthetic Aperture Radar, Sentinel-2 MSI datasets
- Personalized Cancer Diagnosis | Supervised Learning [Jan'23 - Mar'23]**
- Performed **EDA** including preprocessing, distribution of data, random model along with **Univariate Analysis** of features
 - Applied **Naive Bayes, KNN, Logistic Regr., Linear SVM, Random Forest** with **one hot encoding** and **response coded features**
 - Positioned **Stacking Classifier** on top of LR, NB, SVM as well as deployed **Majority Voting Classifier** on top of LR, SVM, RF
 - Achieved **Misclassification** of **34.77%** of points with Balancing Logistic Regression, no latency constraints, interpretability
- Gap Filling of Monthly Sea Level Rising Data using ANN | Prof. Mihir Kumar Das [Aug'22 - Nov'22]**
- Executed the gap filling operation on the PSMSL dataset of mean sea level rise using **Artificial NN** with a accuracy of **85%**
 - Demonstrated **backward propagation** techniques to fill gaps with **approximated numerical values** and found positive results
 - Implemented on the data stations located on the Indian eastern coast, can be implemented to the other regions of the world
 - Carried out **data preprocessing, tuning hyperparameters** like no.of layers and no.of neurons for more improved results
- Netflix Movie Recommendation System | Recommender System [Mar'23 - Apr'23]**
- Raised **XGBoost** over **Surprise library** with **baseline** and multiple **KNN** models for features, optimised for RMSE, MAPE
 - Trained **SVD, SVD++** for other set of features and XGBoost Regressor for handcrafted features, used **Collaborative** based sys.
 - Attained the **RMSE** of **1.08** and **MAPE** of **35.02** for the **SVD**, important feature, can be improved by hyperparameter tuning
- Semantic Search Engine for Q&A | Natural Language Processing | Deployment [Jul'23 - Aug'23]**
- Developed a model that provide **Keywords** related to given Search Query and **Semantic Similarity** with **Similarity Score**
 - Utilized **Universal Sentence Encoder-4, Elastic Search, CSV, JSON** modules to develop **End-to-End System** project on the **Linux**
 - Deployed on **AWS EC2** cloud framework with the help of **Shell Scripts** and **Flask API** with **Containerization** using **Docker**

SKILLS AND EXPERTISE

- Programming Languages:** Python | SQL **Web Framework:** Flask, Streamlit* **Cloud Platform:** AWS, Heroku*
OS and Version Control: Windows, Linux, Git **Database Management System:** MySQL *Elementary proficiency
Libraries/ Framework: Numpy | Pandas | Matplotlib | Seaborn | SciPy | Scikit-Learn | Keras | Tensorflow | NLTK | Xarray
Expertise: Exploratory Data Analysis | Data Science | Machine Learning | Advanced Deep Learning | Stock Analysis

COURSEWORK INFORMATION

Statistical & Machine Learning Methods | Data Analytics | Simulation Lab | Probability & Statistics | Linear Algebra | Calculus | Computational Methods | Satellite Remote Sensing and GIS | Carbon Cycle & Global Climate Change | Climate Risk Assessment

CERTIFICATIONS

- Machine Learning:** Probability and Statistics | Mathematics | Supervised | Unsupervised | ML Algorithms | Deep Learning
- Data Analysis:** Jupyter | Numpy | Pandas | Plotting | Visualization | Dimensionality Reduction | Time Series Analysis
- Python:** VSCode | Data Structures | Computational Complexity | Object Oriented Programming | Error Handling | Debugging

POSITIONS OF RESPONSIBILITY

- Teaching Assistant [Aug'23 - Present]**
- Serving as Teaching Assistant for **Data Analytics Lab** of CORAL Department, IIT Kharagpur by teaching around **25** students
- Member of Publicity Core Committee [Jan'19 - Mar'19]**
- Served as a Member of Publicity Core Committee at B.Tech College Tech Fest "**Prajwalan 2k19**" to look over publicity issue

AWARDS AND ACHIEVEMENTS

- Bagged the **Runner-up** position in the Engineering Quiz competition held at Prajwalan 2020, the B.Tech college tech-fest
- Secured the **Winner** position in the Chemical Mystery event in Prayaas'17, tech-fest of Government Polytechnic, Amravati

*Self declared by the student, CDC could not verify the relevant documents