GAIKWAD SANGRATNA BABURAO | 22ES60R06
RENEWABLE ENERGY TECHNOLOGIES
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Education

Year	Degree/Exam	Institute	CGPA/Marks
2024	M. TECH	IIT Kharagpur	7.18 / 10
2018	B.E.	Savitribai Phule Pune University	56.66%
2013	HSC	Maharashtra state board	68.83%
2011	SSC	Maharashtra state board	79.45%

Projects

Title: Machine Learning Guided Strategies to Develop High Efficiency Indoor Perovskite Solar Cells & Performance Predictions of Flexible Perovskite Solar Cells | M. TECH Thesis

- **Supervisor:** Dr. Trilok Singh, *School of Energy Science & Engineering, Indian Institute of Technology, Kharagpur* • Collected data from various scientific journals
- Performed Machine Learning regression algorithms like Decision tree , Xgboost , Random Forest , KNN, LGBM

Self-Projects :

1) Spam Detection

Developed a Machine Learning-based spam detection system using the Kaggle dataset 'Spam.csv', and created a user- friendly web application for seamless spam identification.
Model used : Natural Language Processing
GitHub link: **https://github.com/sangratna/SBG_Spam_detection.git**

2) M. Tech Project Web Application

Engineered a web application utilizing Flask to predict the efficiency of indoor solar cells, leveraging the insights gathered from the M. Tech project on high-efficiency perovskite solar cells.
Model used: Decision tree regressor
GitHub link: **https://github.com/sangratna/Indoor_solar_cell_efficiency-prediction.git**

3) Sales analysis using MySQL and Tablue

project involves analyzing sales data using MySQL for data management and Tableau for visualization. The dataset contains information about orders, including order number, quantity, price, product details, customer information, and more.
Github link: **https://github.com/sangratna/SALES-PROJECT.git**

4) IPL SQL data analysis

Project involves analyzing team performance over multiple seasons, studying match outcomes based on toss decisions and identifying player of the match trends. This contains SQL query regarding analysis of IPL match data from 2008 to 2023 Github link**: https://github.com/sangratna/IPL_SQL_Data_Anlysis.git**

Achievement

Cracked prestigious GATE 2022 exam with AIR 1505 ranking

Internship

Title: "Occupancy and Occupants' Behavior Detection using Indoor CO2 and Temperature Data".
Supervisor: Dr. Prashant Anand, Department of Architecture and Regional Planning, Indian Institute of Technology, Kharagpur.
This involved gathering data from sensors in various rooms and analyzing clusters for enhanced energy efficiency.
Model used: K-Means

Publications

Machine Learning Guided Strategies to Develop High Efficiency Indoor Perovskite Solar Cells **(Manuscript under preparation)**

Performance Predictions of Flexible Perovskite Solar Cells using Machine Learning Strategies **(Ongoing Work)**

Skills

Programming skills: Python **ML libraries:** Numpy, Pandas, Matplotlib, seaborn, **DL libraries:** TensorFlow, Keras **python IDE:** Jupiter notebook, vs code| **Microsoft Office tools:** PowerPoint, Excel, Word & MS Project |**Analytical tool:** MS Excel calculation, visualization, pivot table | **Visualization tool:** Power BI, Tablue| **Relation Database:** MySQL, Query | **Version control system:** Git | **Soft skills:** Leadership skills, Managerial skills, communication skills, problem solving &time management| **Hard skills:** Report writing, presentation |

CERTIFICATIONS

Power BI Certificate: Udemy | Sept-2023 || **MySQL:** Great Learning | Aug-2023 ||**MS Excel:** Tutorial Point |Dec-2022|| **Data analysis** : Udemy | Jan-2023 || Machine Learning Certificate: Udemy| Sept- 2023

Extra-Curricular

Volunteer: 68th Convocation 2022, IIT Kharagpur: Assisted in organizing and coordinating the convocation event, ensuring a seamless experience for attendees.

Participant: MindSpark Technical Event, College of Engineering Pune: Engaged in problem-solving challenges and quiz competition Participant: INNOVISION Technical Event, JSPM's Rajshree Shahu College of Engineering: Actively participated, showcasing technical skills regarding lathe competition contributing to a vibrant learning atmosphere.