

# SANTANU KUNDU

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## Education

### Scaler Academy

Data Science and ML Ops

March 2023 – April 2025

Bengaluru, Karnataka

### IIT Kharagpur

B.Tech. in Electronics and Electrical Communication with CGPA 8.15

August 2018 – July 2022

Kharagpur, West Bengal

## Technical Skills

Languages	Python, MySQL, PostgreSQL, C++, Scala, HTML/CSS, JavaScript, C, MATLAB
Python Libraries	NumPy, SciPy, Pandas, Scikit-learn, Matplotlib, Plotly, Shap, Optuna, Holidays, Streamlit, TensorFlow, PyTorch, Keras
Models	Regression, Classification, Clustering, Neural Networks, Decision Trees, Random Forest, XGBoost, CatBoost, LGBM, Out-of-Bag, Voting, Bagging, Stacking, GBT, LSTMs
Topics	Predictive Analytics, EDA, Hyperparameter Tuning, Feature Engineering, Model Deployment, Natural Language Processing
Developer Tools	VS Code, IntelliJ IDEA, PyCharm, Google Colab, Jupyter Notebook, Tableau, Postman, Power BI
Distributed Systems	Apache Kafka, Storm, Akka, Hadoop, Hive, PySpark, Virtual Machines
Technologies/Frameworks	Linux (Bash/Shell), Docker, Git, GitHub, DockerHub, DagsHub, MLflow, AWS, Google Cloud Platform, JIRA, CI/CD, Flask
Others	Agile Development, Scrum, Team Collaboration, Technical Writing, MS Excel, MS Powerpoint, MS Word

## Experience

### Adform India LLP

July 2022 – April 2023

Software Developer

- Developed alert systems to track KPIs, triggering notifications based on specific conditions. **Reduced losses by 30%** in Q4 and ensured 24/7 microservices availability, enhancing system reliability and operational efficiency.
- Managed and optimized dev VMs, ensuring seamless operation, and actively contributed to migrating microservices to Kubernetes, **improving scalability by more than 30%**.
- Implemented a Storm Kafka integration project for scalability testing which **decreased time consumption by 50%**. Sample Code: 📄 [Kafka Producer](#) 📄 [Storm Bolt](#)
- Completed an intensive leadership development program at Adform's Denmark HQ, enhancing strategic decision-making skills and communication abilities, which directly contributed to a 20% increase in team project efficiency within three months.
- Leveraged Git, GitHub, and AWS to streamline development processes, enhancing collaboration and reducing project turnaround time.

## Projects

### Binary Prediction of Poisonous Mushrooms | Python, Scikit-learn, Plotly, SHAP, Optuna, SciPy, MLflow August 2024

- Performed exploratory data analysis (EDA) and **trained on 3.1 million data** to predict whether mushroom is poisonous or not, **Matthews correlation coefficients on train and test data are respectively 0.9816 and 0.9815**. 📄 [Source](#)
- Designed and implemented a comprehensive data preprocessing and optimization strategy which refined model performance by optimizing feature selection; the process **reduced training time by 20%** while enhancing the overall dataset quality.

### Regression with an Abalone Dataset | Python, Scikit-learn, Plotly, SHAP, Optuna, SciPy April 2024

- Executed training on 90000 data to predict the number of rings with **RMSLE scores: 0.14616 (train) and 0.14654(test)**.
- Introduced 16 new features**, preprocessed data, and evaluated models (CatBoost, LGBM, XGB etc.). Optimized hyperparameters using Optuna and analysed feature importance with SHAP to enhance model performance. 📄 [Source](#)

### Data Visualisation and EDA based on AD Tech Data | Python, Pandas, Scikit-learn, Shell, Plotly September 2023

- Visualised and organised over 7 million data points**, deriving valuable insights and developing a rule-based prediction model with an **accuracy of 58.6% on training data and 58.2% on test data**. 📄 [Medium](#)

## Certification

- Certified in Google Cloud Platform Infrastructure, Sequences, Time Series and Prediction, and Convolutional Neural Networks in TensorFlow.

## Awards and Achievements

- Secured rank 437/3587 (top 13%) in Multi-Class Prediction of Obesity Risk prediction and rank 494/2606 (top 19%) in Regression with an Abalone Dataset in Kaggle Competitions.
- Cracked JEE Main and Advanced, KVPY SX 2017(Rank 882) and KVPY SA 2016(Rank 437) with JBNSTS Junior(2016) and Senior Scholarship (2018).

## Extracurricular Activities

- Designed and launched a comprehensive [web platform](#) that analyses performance metrics for exams, incorporating response time statistics that led to the identification of key improvement areas and boosted speed by 15%. 📄 [Source](#)
- Accomplished for securing third place as team among 15 teams in NSS Annual Camp 2018 for [performance in social service in villages](#).