

SANTANU KUNDU

☎ 9875521474, 6289260600 ✉ Santanuk13@gmail.com 🌐 [santanu-kundu-iitkgp](https://santanu-kundu-iitkgp.github.io) 🎧 [QuantumStar1999](https://www.quantumstar1999.com) 📄 [santanukundu](https://santanukundu.github.io)

Education

IIT Kharagpur

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

August 2018 – July 2022

Kharagpur, West Bengal

Technical Knowledge

| | | | |
|-------------------------|----------------------|------------|-----------------------------|
| Algorithms | Apache Hadoop Hive | CatBoost | Cloud Computing |
| Data Structures | Team Collaboration | XGBoost | Linear Regression |
| Database | Predictive Analytics | LGBM | Classification |
| Artificial Intelligence | Postman | Bagging | Clustering |
| Data Science | Linux | Voting | Random Forest |
| Data Visualisation | NoSQL | Streamlit | Machine Learning |
| Distributed Systems | MS Powerpoint | EDA | Deep Learning |
| Apache Kafka | MS Word | PostgreSQL | Neural Network |
| Apache Storm | MS Excel | MySQL | Time Series Analysis |
| Apache Akka | PySpark | Bash | Hyper parameter tuning |
| | | | Natural Language Processing |

Technical Skills

Languages: Python, SQL, CPP, Scala, HTML/CSS, JavaScript, C

Python Libraries: Numpy, SciPy, Pandas, Sci-kit, Matplotlib, Plotly, Shap, Optuna, Tensorflow, PyTorch, Keras

Developer Tools: VS Code, IntelliJ IDEA, Google Cloud Platform, AWS, PyCharm, Google Colab, Jupyter Notebook, Tableau

Technologies/Frameworks: Linux, Docker, GitHub, DockerHub, DagsHub, MLflow

Experience

Adform India LLP

August 2022 – March 2023

Software Engineer

Mumbai, Maharashtra

- Developed alert systems to track KPIs, triggering notifications based on specific conditions. Reduced losses by 30% during winter 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%.
- Created a Storm Kafka integration project for testing which decreased time consumption by 50%. 📄 [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.
- Utilized Git, GitHub, Atlassian Jira, Grafana, Kibana and Scala, SBT, Apache Storm, Apache Kafka, distributed Computation systems, AWS, Docker, CI/CD pipeline.

Projects

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

August 2024

- Conducted 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](#)
- Developed 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

- Implemented training on 90000 data to predict the number of rings with RMSLE scores: 0.14616(train) and 0.14654(test).
- Added 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](#)

Person detection from Mouse Data | Python, Pandas, Scikit-learn

October 2021

- Collected Mouse pointer position and wheel data for 72 hours, preprocessed and filtered negative position values, added six new features, and devised an RBF-based SVM model, achieving approximately 80% accuracy on 20% test data.

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.