Rounak Kumar

rounakgupta914@gmail.com | +91 7979886359 | github.com/raw9k |
linkedin.com/in/guptarounak | Portfolio | kaggle.com/raw9kk

Summary

Aspiring Data Scientist and Machine Learning Engineer with hands-on experience in building end-to-end ML pipelines, deploying scalable applications, and leveraging cloud platforms. Proficient in Python, deep learning frameworks, and MLOps practices with a strong foundation in statistics and quantitative analysis.

Skills

Languages: Python, R, SQL, C++
Libraries & Frameworks: Scikit-learn, TensorFlow, Keras, CatBoost, Pandas, NumPy, Flask, Streamlit
Tools: Docker, Git, GitHub Actions, MLflow, Power BI, Azure, AWS
Domains: Data Science, Machine Learning, Deep Learning, Generative AI, Data Analyst
Workflow Skills: CI/CD Integration, Containerization, Model Deployment, Automated Evaluation, Monitoring & Logging

Education

Secondary Education | CBSE ***91.4% (2020)***
Higher Secondary Education | CBSE ***83% (2022)***
Birla Institute of Technology, Mesra Dec 2022 - Jun 2027
Integrated MSc. in Quantitative Economics and Data Science ***CGPA: 7.46/10***
Relevant Coursework: Probability & Statistics (I & II), Linear Statistical Models and Regression Analysis, Optimization Techniques, Stochastic Processes, Sampling Techniques and Design of Experiments, Statistical Machine Learning I.

Technical Projects

Hybrid Anime Recommendation | Python, Keras, Comet ML, GitHub Actions, Docker, Azure **Link**

- Constructed a scalable anime recommendation system utilizing automated Azure Blob Storage ingestion and preprocessing pipelines to efficiently handle over 70 million user-anime ratings for robust and seamless large-scale data processing
- Developed an embedding-based hybrid recommender model as resulting in improved recommendation accuracy leveraging Keras neural network architecture with content-based and collaborative filtering, integrated with Comet ML for tracking.
- Deployed an end-to-end ML application as demonstrating systematized updates and continuous delivery via Azure Web App containers and GitHub Actions CI/CD pipelines, facilitating seamless model retraining and user-facing API availability.

Network Security System | Python, MongoDB Atlas, MLflow, GitHub Actions, Docker, Azure **Link**

- Constructed an end-to-end phishing detection pipeline as validated through validated schema checks and reproducible artifacts by implementing MongoDB ingestion, transformation, feature processing, model training, and a FastAPI /predict service.
- Instituted secure automation as demonstrated through on-push cloud deployments and signed image digests by containerizing the service, configuring GitHub Actions for Azure Container Registry, and injecting secrets via environment variables.
- Provisioned production hosting as validated via externally accessible API and consistent workflows by deploying to Azure Web App, adding a health endpoint, and implementing a responsive Jinja interface with cohesive theming.

Student Performance Prediction Model | Scikit-Learn, CatBoost, Docker, GitHub Actions, Azure **Link**

- Accomplished accurate math score prediction as reflected by R^2=0.87 by engineering a full-stack ML pipeline with robust validation, feature engineering, and cross-validation, ensuring reproducibility and delivering high predictive accuracy.
- Achieved 40% reduction in manual pre-processing evidenced through workflow metrics by automating ingestion, transformation, and model training using Python, Scikit-Learn, and CatBoost with reproducible pipelines and robust error handling.
- Delivered scalable public model hosting as measured by uptime and reach by deploying with Docker, GitHub Actions, and Azure Web App, enabling continuous delivery, mechanized builds, and secure containerized environments.

Leadership & Extracurriculars

Joint President, Society for Data Science – BIT Mesra April 2025 – Present

- Spearheaded the university's Data Science Society, curating and leading hands-on workshops, hackathons, and expert-led sessions on Generative AI, Machine Learning, and Data Science to foster a culture of innovation and technical excellence
- Mentored students in data-driven projects, guiding them through practical implementations and real-world applications, and actively fostered collaborations with industry experts to enhance learning, exposure, and professional networking.

Certificates

- **Career Essentials in Data Analysis** - Microsoft & LinkedIn
- **Machine Learning with Python** - freeCodeCamp
- **Learning Microsoft Power BI** - Infosys Springboard