

Kratik Rath

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Education

Indiana University - Bloomington

Master of Science in Data Science

August 2024 – May 2026

Bloomington, Indiana

Medi-Caps University

Bachelor of Technology in Computer Science and Engineering

August 2019 – July 2023

Indore, India

Technical Skills

Languages: Python, C++, R, C#

Tools / Technologies: Android Studio, Visual Studio, Tableau, Power BI, Jupyter Notebook, Google Colab, PyCharm, Microsoft Excel, GitLab, GitHub, Git, Docker, Postman

Databases: SQL, MySQL, PostgreSQL, Microsoft SQL, SQLite, JSON

Machine Learning/Libraries: TensorFlow, Keras, CNN, OpenCV, Matplotlib, Pandas, Numpy, Pyodbc, Openpyxl, Scikit-learn, Seaborn, Regression, Clustering, Arimax and Sarimax

Frameworks: Flask API, ASP.NET

Work Experience

Swastika Investmart Ltd.

January 2024 – July 2024

Software Engineer Intern

Indore, India

- Automated Digital Marketing reports using **Flask API** and **Python** which analyzed **5 million records** daily of potential clients from different zones and scheduled reports on mail at midnight via **cronjob**.
- Developed an **ASP.NET** API to check the pending status of clients in the MutualFunds database of past 7 days, update client records on Netcore, and generate logs with push reference numbers for accurate tracking and verification.
- Designed a **Docker-based** universal scheduler to manage and log 25 APIs on a single server, streamlining operations and enabling future API scheduling and log management through a single, scalable system.

Mahindra and Mahindra Ltd.

January 2023 – April 2023

Data Analytics Intern

Mumbai, India

- Constructed **ARIMAX** and **SARIMAX** time-series forecasting models using **Python** on 20 years of monthly regression data (2001-2020), achieving **87% accuracy** in predicting financial trends for the next 6 years.
- Created matrix of **1k+ data** on **MS Excel** for different car models to enhance individual tracking of parts.

Tech Mahindra Ltd.

June 2022 – August 2022

Student Trainee

Pune, India

- Acquired in-depth knowledge of CRM, E2E Billing, OSS, and BSS systems.
- Examined CRM data using MS Excel and enhanced data interpretability by creating **5 interactive dashboards** in **Tableau** enhancing insights for better decision-making.

Projects

Lung Xray Images Classification | Google Colab, Python

December 2024

- Performed analysis and clustering on **1,227 X-ray images** using PCA for dimensionality reduction, with **K-Means** and **Gaussian Mixture** visualizing separability in 2D while retaining **90%** variance.
- Developed a deep learning model for classifying COVID-19, Pneumonia, and Normal cases, attaining **98%-99% accuracy**, leveraging **TensorFlow/Keras** for training and optimization.

Point-of Contact API | MS SQL Server, Python, PyCharm, Docker

November 2024

- Designed and implemented a **SQL Server** database from scratch, including remote connection setup and dataset creation using **Mockaroo**. Constructed a **Flask API** using **Python** which retrieves data through stored procedure and converts it into an Excel file.
- Made API calling dynamic which allows users to call data by product or repository name directly through the API url.
- Built a fully automated workflow by deploying the API using **Docker** and configuring a **cronjob** to generate and email Excel reports based on the database query results at scheduled intervals enhancing operational efficiency.

Time-series forecasting on Air Passengers data | Jupyter Notebook, Python, SQLite

April 2023

- Forecasted monthly air passenger traffic (1949-1960) using **ARIMAX** and **SARIMAX** with **97%-98% accuracy**.
- Checked seasonality and continuity using **ACF/PACF** and tested models with **AutoARIMA** for the best fit.

Student Leadership Role

Medi-Caps Innovation and Incubation Center

August 2021 – December 2022

Vice-President

Medi-Caps University

- Oversaw the day-to-day operation of the Incubation Centre (with 50+ members and 5 team divisions) and worked with student start-ups closely.
- Led the planning and execution of virtual tech fest Aarambh-2020 and conducted a webinar on **"Why Innovation is Important"** as **Innovation Ambassador** at Medi-Caps University under IIC (Institution's Innovation Council).