

# Sagnik Roy

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## EDUCATION

### University of Michigan-Dearborn

Master of Science in Data Science (GPA: 3.8)

Graduate Teaching Assistant

Courses: Applied Regression Analysis, Computational Statistics, Deep Learning, Artificial Intelligence, Data Security & Privacy, Intelligent Systems

Dearborn, MI

Expected Graduation: May 2026

Jan 2025 - Apr 2025

### SRM Institute of Science & Technology

Bachelor of Technology in Electronics and Communication (GPA: 9.41/10)

Courses: Programming for Problem Solving, Pattern Recognition & Neural Networks, Probability & Stochastic Process

Chennai, India

May 2022

## TECHNICAL SKILLS

- **Programming Languages:** Python, R, SQL, C/C++
- **Tools:** Excel, Tableau, Microsoft Power BI, Alteryx, Microsoft Azure, GCP (Dialogflow), Git, Jira, MySQL
- **Libraries/Frameworks:** Pandas, NumPy, Scikit-learn, XGBoost, TensorFlow, Keras, PyTorch, Matplotlib, Seaborn, Computer Vision, Statsmodels
- **Certification:** Data Science and Machine Learning Program – Indian Institute of Technology Delhi

## WORK EXPERIENCE

*Ernst & Young - Global Delivery Services*

Pune, India

### Associate Software Engineer - Data & Analytics

Aug 2022 - Apr 2024

- Utilized Azure Databricks and Dataflow to perform advanced data manipulation tasks, creating efficient data pipelines to streamline the data processing workflow and enhance optimization. Awarded with client recognition for performance
- Leveraged Apache Spark on Azure Synapse Analytics to optimize Extract, Transform, and Load processes, enhancing data warehouse performance by 35%
- Worked hands-on with MySQL and Azure SQL databases to optimize performance by executing complex queries and maintaining data integrity across environments
- Analyzed complex datasets by using Alteryx and developed over 30 insightful PowerBI dashboards, transforming raw data into impactful reports. Received a spot award for exceptional contribution

*Ernst & Young - Global Delivery Services*

Chennai, India

### Data & Analytics Trainee

Feb 2022 - Apr 2022

- Developed a COVID-19 analytics model using machine learning and exploratory data analysis to diagnose COVID-19 status. Integrated the model with third-party Application Programming Interfaces for real-time data and health information, with the frontend built on PowerBI to visualize and interpret the insights
- Led a team of four to deliver complex analytics project on schedule, fostering collaboration and achieving outstanding results

*HighRadius*

Bhubaneswar, India

### Product Intern

July 2021 - Mar 2022

- Built a banking chatbot using Google Dialogflow, combining NLP and machine learning to automate customer interactions. The solution improved engagement and streamlined core financial services
- Created a user-friendly note-taking application using React.js that offers a dynamic and responsive interface. The application allows users to create and personalize their notes according to their preferences

## PROJECTS

*Hospital Readmission Prediction for Diabetic Patients*

- Developed classification models to predict 30-day hospital readmissions, optimizing recall to identify high-risk diabetic patients and improve care outcomes
- Applied feature engineering, class balancing and SHAP analysis to enhance model performance and interpretability on imbalanced clinical data from the UCI repository

*Payment Date Prediction*

- Developed an AI-powered fintech tool to forecast invoice payment dates, helping businesses manage cash flow and reduce late payments
- Evaluated multiple regression models and selected XGBoost for its superior performance, achieving 94.76% accuracy on historical financial data, using A/B testing to compare predicted payment dates with actual due dates