

# Sagnik Roy

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## EDUCATION

### University of Michigan - Dearborn

Masters of Science in Data Science

Sep 2024 - Present

Dearborn, MI, USA

**Courses:** Big Data Analytics and Visualization, Applied Regression Analysis, Machine Learning and Computational Statistics, Advanced Artificial Intelligence

### SRM University

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

July 2018 - May 2022

Chennai, India

**Courses:** Programming for Problem solving, Advanced Calculus and Complex Analysis, Pattern Recognition and Neural Networks, Probability and Stochastic Process

## EXPERIENCE

### Associate Software Engineer - Data & Analytics

Aug 2022 - April 2024

Ernst & Young - Global Delivery Services

Mumbai, India

- 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.
- Used Apache Spark on Azure Synapse Analytics to optimize ETL processes, enhancing data warehouse performance by 35%.
- Analyzed complex datasets by using Alteryx and developed over 30 insightful Power BI dashboards, transforming raw data into impactful reports. Received a spot award for exceptional contribution.

### Data Generic Trainee

Feb 2022 - April 2022

Ernst & Young - Global Delivery Services

Mumbai, India

- Developed a COVID-19 analytics model using machine learning and exploratory data analysis to diagnose COVID-19 status, integrated with third-party APIs for real-time data and health information. The frontend is built on PowerBI to visualize and interpret the insights.
- Led a high-performing team in successfully executing complex projects, driving collaborative efforts, and achieving exceptional results within tight deadlines.

### Product Intern

July 2021 - March 2022

HighRadius

Bhubaneswar, India

- Built a banking chatbot using Dialogflow, utilizing natural language processing and machine learning to improve customer interactions and optimize financial services.
- Created a user-friendly note taking application using React.js that offers a dynamic and responsive interface. The application allows users to effortlessly create and personalize their notes according to their preferences.
- Performed rigorous testing activities on FSIT environment to ensure software quality and functionality, utilizing various testing methodologies and tools to deliver reliable and error-free products.

## PROJECTS

### Payment Date Prediction | Python, Data Pre-processing, Regression Analysis, Model Evaluation, HTML, CSS

- Built an AI-enabled B2B FinTech application to predict invoice payment dates, addressing late payments.
- Employed various machine learning models to identify the one with the lowest Mean Squared Error (MSE) and highest accuracy. Trained the XGBoost model on historical financial data, achieving 94.76% accuracy in predicting due dates.
- Designed the frontend using HTML and CSS to visualize and analyze customer and invoice information.

### Movie Recommendation System | Data Analysis, Machine Learning, Natural Language Processing, Sentiment Analysis

- Developed a Content-Based Recommender System to suggest movies based on user preferences and analyze sentiments in their reviews. Utilized a Kaggle dataset, which was pre-processed and analyzed to enhance recommendation accuracy.
- Fine-tuned machine learning models to accurately predict user movie preferences from past interactions and review sentiments.

## TECHNICAL SKILLS

**Programming Languages:** Python, SQL, R, C, C++

**Tools:** Tableau, PowerBI, Microsoft Excel, Git, Jira, Microsoft Azure, Alteryx, Visual Studio Code

**Libraries:** Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, TensorFlow, Keras

**Certifications:** Data Science and Machine Learning program from Indian Institute of Technology Delhi