

Sourav Mandal *Data Scientist & AI Specialist*

📍 Vill.:Rajbagan, P.O.: Chakdaha, Dist.: Nadia, State: West Bengal, Pin: 741222 ✉ mandal.srv1998@gmail.com

☎ +91 8618241725 📅 27/11/1998 🇮🇳 Indian in sourav-mandal-390064210 🔄 Sourav9827 📁 Portfolio



👤 Profile

As a highly motivated and skilled data scientist with a postgraduate degree in Mathematics, I possess a solid understanding of various data science concepts and tools, including Python, SQL, Machine Learning, Deep Learning, NLP, and PowerBI. With hands-on experience in multiple data science projects and internships, I have developed a strong problem-solving and analytical mindset. Additionally, my past experience in teaching mathematics and mentoring a team of interns for a backend operation internship showcases my excellent communication and leadership skills. As a result, I am confident in my ability to leverage my skills and experience to contribute to any data-driven organization's success.

🧠 Skills

Teaching (*Mathematics and Computer Science*)

Computer Science (*Python, SQL, Machine Learning and Data Science*)

Python (*Pandas, Numpy, Matplotlib, Seaborn, Flask, Plotly, Dash, Sklearn etc.*)

Data Analytics (*MySQL, Tableau, PowerBI, Snowflake, Pentaho etc.*)

Databases (*SQL and Mongo DB.*)

MS-Office (*Advanced Excel, Power point, Word, Access.*)

Team Leader (*I lead a group of interns under me, monitor their work and as a team we solve various task in Highway Delite.*)

Machine Learning (*Linear and Logistic Regression, SVM, Xgboost, Random Forest, Naïve Bayes etc.*)

Deep learning (*ANN, CNN and RNN*)

NLP (*NLTK, Machine Learning, RNN, LSTM, GRU, Self-Attention model, Transforms, Chatbot etc.*)

📄 Certificates

Data Analytics Consulting Virtual Internship(KPMG)
(*Data Quality Assessment Data Insights Data Insights and Presentation May 8th, 2021*)

Data@ANZ Program (*Exploratory Data Analysis Predictive Analytics May 13th, 2021*)

Full Stack Data Science (*ineuron.ai*)

Python for Data Science and Machine Learning Bootcamp
(*udemy*)

Introduction to Machine Learning (*Coursera*)

Data Science foundations (*Great Learning*)

🎓 Education

Full Stack Data Science program, ineuron.ai 🔄
03/2022 – 03/2023

Data Science and Analytics, Machine Learning, Deep Learning and Big data basics.

Diploma in Information Technology,
Nehru Yuva Computer Shiksha Kendra
02/2021 – 02/2022 | Chakdaha, India

Typing, MS Office, Advanced Excel, HTML, CSS and Basic C Programming.

📁 Professional Experience

Subject Matter Expert, Vertocity

03/2023 – present | Remote, India

Training students on Data Science and Analytics
SQL, Advanced Excel, Python, Statistics, Machine Learning, Power BI, Time series analysis, Deep Learning and NLP.

Data Analytics intern, ineuron.ai 🔄

05/2023 – 07/2023 | Remote, India

- **Project Title:** NBA Data Analytics Project
- **Tools:** Python, SQL and Power BI
- **Final Output:** A presentation of the findings, including visualizations and recommendations.
- **Roles and Responsibilities:**
 - Collected (Webscraping) and cleaned NBA player data.
 - Developed and executed data analysis queries.
 - Created visualizations of the data.
 - Presented the findings and documentations to stakeholders.

Data Science Intern, ineuron.ai 🔄

12/2022 – 02/2023 | Remote, India

- **Project Title:** News Article sorting
- **Objective:** To classify news articles into predefined categories like Sports, Technology, Entertainment, etc. using deep learning methods.
- **Tools:** Python, Google's BERT model, Azure App Services, Flask, HTML/CSS, Pandas, NumPy, Scikit-learn, TensorFlow, and Keras.
- **Final Output:** Achieved 97.96% accuracy on test set, deployed model on Azure App Services using Flask web app for predictions
- **Roles & responsibilities:**
 - Pre-processing the data to make it suitable for the model
 - Fine-tuning the BERT model for News Category Classification
 - Developing the Flask application for the model
 - Deploying the model on Azure app services
 - Testing and debugging the application
 - Documentation of the project

Teacher(Mathematics and CS), Self Employed

2017 – present | Chakdaha, India

- Freelancing Teacher of Mathematics and Computer Science
- Creating Presentations and Learning designs for everyday classes.
- Good understanding of Concepts and Application in real life situations.
- Noticeable improvements in Student's Academic results.

Associate, Highway Delite

02/2022 – 11/2022 | Remote, India

- Building database for highway related data.
- Train and monitor the work of new interns.
- Research and create documents for tourism data
- Verify and upload the highway information in the backend of the website

Data Analyst Intern, The Sparks Foundation

08/2021 – 09/2021 | Remote, India

- Prediction using Supervised ML
- Prediction using Unsupervised ML
- Exploratory Data Analysis - Retail
- Exploratory Data Analysis - Terrorism
- Prediction using Decision Tree Algorithm

Bachelor in Education (B.Ed), W.B.U.T.T.E.P.A

09/2021 – 09/2023 | Santipur, India

On-site School Teaching Internship, Seminars, Micro-teaching, Presentations, Models, Learning Designs etc.

M.Sc Mathematics(Pure), University Of Kalyani

08/2019 – 08/2021 | Kalyani, India

- Specialization in Complex Analysis and Differential Geometry.
- Advanced Research Project on Wave Equations.

B.Sc (Hons.) Mathematics, University Of Kalyani

07/2016 – 07/2019 | Kalyani, India



Courses

Associate Financial Analysis, invact.com

06/2023 – present

Prompt Engineering, deeplearning.ai

04/2023 – 04/2023

Introduction to R Software, NPTEL

09/2020 – 11/2022

Learning Analytics Tools, NPTEL

07/2021 – 10/2021

Probability for Computer Science, NPTEL

07/2021 – 10/2021

Introduction to Machine Learning, NPTEL

07/2021 – 09/2021

Data Analytics with Python, NPTEL

01/2021 – 04/2021

Data Science for Engineers, NPTEL

01/2021 – 03/2021

Programming, Data Structures And Algorithms Using Python, NPTEL

09/2020 – 11/2020

Introduction to R Software, NPTEL

09/2020 – 11/2020

Python for Data Science, NPTEL

09/2020 – 10/2020



Languages

English • Hindi • Bengali



Declaration

I hereby declare that all the information furnished above is correct to the best of my belief. I am responsible for the authenticity of all the information.

Sourav Mandal
Chakdaha, 29/07/2023



Projects

Tweets Sentiment Analysis,

Data analysis and machine learning using Python and NLTK

10/2022 – 11/2022

- **Objective:** Analyze the sentiment of tweets and classify them as positive, negative, or neutral using machine learning
- **Tools:** Python, Scikit-Learn, SciPy, NLTK, Pandas, Heroku, Falsk, HTML/CSS.
- **Final Output:** Achieved 85% accuracy on test set, deployed model on Heroku as a web app for predictions
- **Roles & responsibilities:** Sole contributor, responsible for all aspects of the project including data collection, preprocessing, model training, and deployment. Managed the entire project from start to finish.

Mushroom Classification, *Develop an accurate and reliable model for classifying mushrooms.*

09/2022 – 12/2022

- **Objective:** Classify mushrooms into edible or poisonous categories using machine learning
- **Tools:** Python, scikit-learn, pandas, SciPy, NumPy, Flask, Heroku
- **Data:** Mushroom dataset with over 8,000 records and 22 features
- **Preprocessing:** Data cleaning, encoding categorical variables, splitting into training and test sets
- **Model training:** Comparison of various algorithms and selection of best performing algorithm for classification
- **Final output:** Achieved 99% accuracy on test set, deployed on Heroku as a Flask web app for predictions
- **Roles & responsibilities:** Sole contributor, responsible for data collection, preprocessing, model training, deployment, and project management

Insurance Fraud Detection, *Develop and implement a fraud detection system for an insurance company.*

07/2022 – 08/2022

- **Problem Statement/Objective:** To develop a machine learning model that can accurately detect fraud in insurance claims to minimize losses and improve claim processing efficiency.
- **Tools:** Python, Jupyter Notebook, Scikit-learn, Pandas, NumPy, Flask, Heroku, HTML/CSS.
- **Final Output:**
 - A machine learning model with accuracy of 77.2% in detecting fraudulent claims that can predict the likelihood of a claim being fraudulent based on various features such as claim amount, policy holder history, and claim type.
 - The model was deployed on Heroku as a web application that can be used to submit insurance claims and receive an instant fraud prediction.
- **Roles & Responsibilities:** Sole developer and project manager. Conducted data analysis and preprocessing, trained and evaluated machine learning models, and deployed the final model on Heroku.
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Customer Details Dashboard, *Excel-based customer dashboard provided insights and improved business performance.*

- **Objective:** Create a dashboard to analyze customer data and provide insights for business decisions.
- **Tools:** Excel, Power Query, DAX.
- **Methodology:** Extracted and transformed customer data from multiple sources, created calculated columns and measures, and designed interactive visuals.
- **Results:** Provided insights into customer demographics, behaviors, and preferences, leading to data-driven decisions.
- **Impact:** Improved customer retention, acquisition, and satisfaction for the business.