

Tuhin Das

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Professional Summary

- Over 7+ years of cross-functional experience in HVAC, sustainability, CSR research, economic research, and consumer behaviour studies, specializing in advanced analytics, forecasting and modeling with core project management expertise.
- Led and managed large-scale surveys (CAPI-based) and data collection initiatives, ensuring high data quality and actionable insights in alignment with economic and CSR research objectives.
- Designed automated data pipelines and frameworks to extract and structure data from online sources with scalable architectures.

Skills

Programming Languages: Python, SQL

Libraries: Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn, GeoPandas, XGBoost

Tools: Power BI, Excel, MySQL, PowerPoint

Platforms: Jupyter Notebook, VSCode, GitHub, Git

Web Scraping: Selenium, BeautifulSoup

Backend APIs: REST API, FastAPI

Frontend: Streamlit

Relevant Coursework: Statistics, Data Analysis and Visualization, ML Algorithms, Time Series Forecasting, Monte Carlo Simulations, Probability Distributions

Education

MS, Data Science	Feb 2022 – Dec 2022
Liverpool John Moores University, Liverpool	Grade: 73%

PGD in Data Science (spec. in Business Analytics)	Oct 2020 – Nov 2021
International Institute of Information Technology, Bangalore	CGPA: 3.63/4

B.Tech, Mechanical Engineering	Mar 2011 – Jul 2015
Manav Rachna International University, Faridabad	CGPA: 7.25/10

Experience

Ascension Centre for Research and Analytics

Manager – Analytics and Research

Mar 2024 – Jan 2025

- **Developed and implemented Monte Carlo simulations** for a novel health study by modeling complex **health parameters**, utilizing a range of **probability distributions** to account for uncertainty and variability.

- **Developed SOPs** and detailed process documentation to streamline projects and daily activities, increasing productivity.

Analyst

Dec 2022 – Feb 2024

- **Programming and Data Automation:** Developed **Python scripts** to clean and organize datasets for improved analysis and reporting. Utilized web scraping tools, including **Selenium** and **BeautifulSoup**, to extract data from secondary open-source platforms, including government and private data sources to automate manual effort, thereby increasing efficiency
- **Advanced Analytics and Research:** Experimented extensively with complex, multi-domain datasets (**agriculture, consumer expenditure, real estate, aviation, automobile, labour surveys, etc**) using a wide array of data preprocessing, EDA and ML modeling techniques (**Linear Regression, XGBoost, SVM, Random Forest, Logistic Regression, etc**) to uncover insights aligned with specific use cases backed by strong research principles.
- **Surveys:** Conducted training sessions for investigators on collecting primary data using **CAPI** for face-to-face surveys.
- **Lead Conversion:** Developed and implemented effective **communication strategies** to onboard esteemed B-Schools as active participants in a B-School ranking project for a Washington-based MNC, resulting in **11% increased participation in 2023 and 31% increased participation in 2024**

Chrysalis Services Private Limited Senior Research Associate

Jan 2020 – Aug 2020

- **Streamlined research processes** for evaluating corporate organizations' CSR goals and the **Social/NPO** sector's vision. Created weekly activity reports for various clients, tracking progress toward their goals.
- Identified business problems and pain points and provided **strategic recommendations** to clients. Collaborated with stakeholders to develop and implement workflows, marketing campaigns and process improvements.
- **Acted as a liaison** between clients and stakeholders, facilitating communication and ensuring that goals were met efficiently and effectively.

GS Photon Energy Private Limited Research Analyst

Feb 2018 – Nov 2019

- Led multi-sector projects driving **market research**, sustainability initiatives and financial strategy across agriculture, plastics, dairy, and waste-to-energy industries.
- Conducted in-depth research on emerging technologies, value chains, and investment strategies to support strategic decision-making and business development.
- Developed investor-focused **reports, strategic logistics maps and concept notes**, enabling funding opportunities and the promotion of sustainable technologies across India and Africa.

Krishna Refrigeration and Infrastructure Private Limited
HVAC- Site Engineer

Dec 2015 – Nov 2017

- **Commissioned 40 T centralized HVAC project** at the South Pavilion of Noida Cricket Stadium
- **Commissioned 22 T centralized HVAC project** at Noida Club, a UP government-owned recreational area
- **Improved the efficacy of the ventilation systems** at the North Pavilion of Noida Cricket Stadium
- **Trained colleagues in Microsoft Excel** for various tasks associated with supervision work

Collaborative ML/AI Projects

Artificial Intelligence Engineer

July 2025 – Present

Omdena AI Innovation Challenge for Bhutan

Project: Building ClimateSense: Combat Climate in Bhutan

- **Leading a cross-functional team of international collaborators** to drive advanced exploratory data analysis (EDA).
- **Developed and deployed a prototype flood risk model application using Streamlit.**
- **Architected a web development pipeline** integrating **GitHub, FastAPI, Streamlit, and Render** to enable seamless end-to-end model development and deployment.
- **Coordinating team meetings and streamlining workflows** across all teams to enhance productivity and collaboration.

Machine Learning Engineer

June 2025 – July 2025

Omdena Local Chapter - Bhutan

Project: Leveraging AI to combat Climate Change in Bhutan

- **Contributed to the team of international collaborators** to build an **MVP** of the flood risk model.
- **Extracted data from secondary sources** and collated them to perform **advanced EDA** (**plotly, matplotlib**, etc) and visualized the patterns by intensively using **heatmaps**

Lead Machine Learning Engineer (Task Leader)

May 2024 – Sep 2024

Omdena Local Chapter - Brooklyn

Project: Evaluating Solutions to Ameliorate the Impact of Food Deserts in Brooklyn Using AI

- **Led a cross-functional team of international collaborators** to build **end-to-end Food Desert Finder App**, responsible for creating the project roadmap, **ML workflow** and acted as liaison for the analysis and modeling team.
- Identified food deserts at the highest granularity level called "Census Tracts" in Brooklyn using **socio-economic and demographic data**, Food Outlets data using **Clustering algorithms** like **KMeans, DBScan, Gaussian Mixture Models**.
- **Performed advanced EDA** and identified patterns of food scarcity in tandem with research journals.

Machine Learning Engineer (Task Leader)

Jul 2024 – Sep 2024

Omdena Local Chapter - Paris

Project: Housing Affordability Analysis in the Greater Parisian Region

- **Led a cross-functional team of international collaborators** to build **end-to-end Real Estate App**, responsible for integrating the **ML workflow and Statistical methodologies**.
- Developed Python scripts to find outliers (potential scams) in properties using **Gaussian and t-distributions with 95% confidence intervals**
- Screening potential scams in the Paris real estate market to ensure that customers receive reliable housing options to provide verified choices across all **20 arrondissements of Paris**, helping users make informed decisions when buying or renting properties.
- **Acted** as a liaison between **data collection and data analysis teams**.

Machine Learning Engineer (Task Leader)

Jun 2021 – Aug 2021

Omdena Local Chapter - Ghana

Project: Financial Inclusion in Ghana: Using Machine Learning to bank the unbanked

- **Led a cross-functional team of international collaborators** to refine the research workflow by experimenting with EDA and preliminary modeling techniques that helped the other teams to work on different aspects of the project
- **Identified key aspects impacting the current banking situation** in Ghana
- **Extracted secondary data** from government-published journals and created a **data visualization** methodology
- **Addressed research gaps** with team members for the successful completion of the project

Certifications

- NASSCOM Certified Data Science Professional (Approved by Govt. of India)
- Monitoring & Evaluation Research (Agzistence)
- Introduction to Machine Learning in Production (DeepLearning.AI)

Affiliations

- Omdena Local Chapters (Task Leader)
- DataDrivenInvestor.com (Medium Platform) – Writer
- Level Up Coding (Medium Platform) - Writer