

# Tuhin Das

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## Professional Summary

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- 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.
- Leadership roles in collaborating with international teams on diverse AI/ML projects, driving model development, advanced EDA and end-to-end implementation across domains such as real-estate, climate, agriculture, banking, etc.
- Led and managed large-scale nationwide surveys (CAPI-based) and data collection initiatives for business and economic research projects.
- Designed automated data pipelines and frameworks (scalable architectures) to extract and structure data from online sources for secondary data collection.

## Skills

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**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

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**MS, Data Science**

Liverpool John Moores University, Liverpool

Feb 2022 – Dec 2022

Grade: 73%

**PGD in Data Science (spec. in Business Analytics)**

International Institute of Information Technology, Bangalore

Oct 2020 – Nov 2021

CGPA: 3.63/4

**B.Tech, Mechanical Engineering**

Manav Rachna International University, Faridabad

Mar 2011 – Jul 2015

CGPA: 7.25/10

## Experience

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

## Analyst

Dec 2022 – Feb 2024

- **Programming and Data Automation:** Designed **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:** Improved 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.
- Recognized 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.
- 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 2 big centralized HVAC projects in Delhi NCR region (40T at South Pavilion at Noida Cricket Stadium and 22 T at Noida Club, which is a UP government recreational area)**
- **Improved the efficacy of the ventilation systems by 30%** 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 (Task Leader)**

July 2025 – Present

**Omdena AI Innovation Challenge for Bhutan**

*Project: Building ClimateSense: Combat Climate in Bhutan*

- **Task Leader for 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*

- **Spearheaded 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.
- Discovered 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 spotted 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**.
- **Built** 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*

- **Managed 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**

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

## **Affiliations**

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