

# Abhishek Tiwari

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[LinkedIn](#) | [Portfolio](#) | [GitHub](#)

## PROFILE: Data Scientist

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An AI trainer, training a bot that predicts 3d models using visual 2d data. With a background in mechanical engineering and groundwater management, I predicted missing metrological data in my master's thesis, using data science. Later, I took formal training in Machine learning, Deep learning, Data analysis, Web Development, and Cloud Infrastructure. Driven to apply and enhance data-driven problem-solving skills, focusing on tackling challenges in impactful projects.

## PROJECTS

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### Milestone Project at “DataScientest”:

- **Project Focus:** Weather prediction in Australia, using 10 years of data to forecast rain, and temperature.
- **Objective:** Predict rain for the next day, with applications in agriculture and logistics.
- **Challenges:** Missing data and class imbalance (more dry days than rainy days).
- **Solutions:**
  - Used KNN imputation for missing values.
  - Applied SMOTE for oversampling to balance the dataset.
- **Modeling Approach:** Tested multiple Machine and Deep learning models, including Random Forest, XGBoost, and DNN.
- **Results:**
  - Random Forest and XGBoost delivered high accuracy and recall in predicting rain.
  - XGBoost with SMOTE oversampling: Accuracy Train Set: 0.917, Accuracy Test Set: 0.862.
- **Skills:** Data preprocessing, Feature extraction, Machine learning application for real-world predictions.
- **Tools:** Python, Scikit-Learn (Random Forest, Decision Tree, KNN Classification, Logistic Regression Classification), Random Over and Under-sampling, SMOTE (Synthetic Minority Over-sampling Technique), XGBoost, Deep Neural Network, Geopandas, and Steamlit.

### [Berlin Rent Prediction Model Using Machine Learning \(GitHub\)](#):

- A fully functional website hosted on an AWS ec2 server that predicts rent for different apartment types in several locations in Berlin.
- Train Accuracy: 0.927, Test Accuracy: 0.872.
- **Skills/Tools:** Predictor: XGBoost, AWS EC2, NGNIX web server, Postman, Flask, HTML, CSS, and JavaScript.

### A Footballer’s Image classifier ([GitHub](#)):

- A website that uses photos to classify football players (Accuracy: 0.887)
- **Skills/Tools:** Web scraping, Face Detection: OpenCV Haar-cascade, and Classifier: SVM.

### A Microsoft Power-BI and SQL Sales Analysis Dashboard([GitHub](#)):

- A Microsoft Power-BI, Dashboard showing information regarding sales of A company over four years (2017-2020) consists of 5 slides named Overview, Yearly, Market, Customers, and Product Analysis.
- **Skills /Tools:** Microsoft Power BI, SQL, and MySQL DBSM.

**Current Project: Flood and Drought prediction (change in river basin) to Meteorological data.**

## WORK EXPERIENCE

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### Data Annotator/ AI trainer

October 2024- Present

Innodata India Pvt. Ltd. Noida, India.

- Training AI model to predict 3d model of object.
- **Prompt Engineering:** Training AI on feasible experts and amateur prompts.
- **Computer Vision:** Training and annotating visual 2d data for an AI model to predict a “3d model”.

**Foundry Production Employee (Gravity Casting)**

January 2023 – January 2024

*Bharat Forge Aluminiumtechnik GmbH., Brand-Erbisdorf, Germany.*

- Performed quality control of the aluminum casting (NDT analysis of alloying elements - visually and with EPOCH 650 defect detector) to detect porosity and holes.
- Performed Spectrochemical analysis of aluminum samples for precise quantification of the element composition.
- Controlled the process flow by Kuka-robot programming.

**Working Student Position as a Production Assistant**

June 2020- November 2020 &amp;

*Volkswagen Fahrzeugwerk, Zwickau, Germany.*

June 2021- November 2021

- Assembled the engine/motor and the outer body for VW cars.

**Amazon Shipping/Warehouse Associate**

October 2018- May 2019

*Amazon, Winsen-Luhe, Germany.*

- Picked packed, and shipped customer orders.

**Project and Execution Function Engineer**

July 2015- July 2017

*Global Water Separation Systems Pvt Ltd, New Delhi, India.*

- Planned and installed industrial water separation systems.
- Acquired, managed, and analyzed data using Python and Excel to provide insight into projects.
- Developed positive working relationships with stakeholders to coordinate work activities effectively.

**EDUCATION****Diploma in Data Science**

May 2024

*DataScientest, Puteaux, France.*

- **Machine Learning Models:** Gained expertise in regression, classification, and clustering using algorithms like XGBoost, Logistic Regression, Random Forest, and K-Means.
- **Deep Learning Fundamentals:** Developed skills in neural networks, convolutional networks, and transfer learning using Keras and TensorFlow.
- **Data Engineering:** Proficient in SQL, API integration, and distributed data processing with PySpark.
- **MLOps:** Hands-on experience with Docker, Streamlit, and deploying machine learning models in cloud environments (AWS).
- **Time Series and Anomaly Detection:** Worked on advanced time series forecasting (ARIMA/ ARMA) and anomaly detection methods (KNN, LOF).
- **Data Analysis:** Professionally trained in Python, Tableau, Power BI, Matplotlib, Seaborn, Pandas, and Numpy.

**Master of Science, Groundwater Management (Geoinformatics)**

June 2023

*Technische Universität Bergakademie, Freiberg, Saxony, Germany.*

- **Master's Thesis:** Hydrochemistry of Lake Zwenkau in Leipzig and its future aspects. Analysis of the meteorological data of the district of Leipzig and chemical analysis of Lake Zwenkau. Created Climate Change Impact Assessment model of Zwenkau Lake by integrating metrological data into ArcGIS.
- **Modules in Modeling:** Geoscientific Communication (ArcGIS automation using Python), Hydrogeological Flow, and Transport Modeling of Water (FeFlow).
- **Modules in Management:** Project Management, Resource Management, Corporate Sustainability & Risk Management, Human Resources & Organization Management.
- **Modules in Environmental Sciences:** Environmental Management & Policies and Hydrogeology.

**Bachelor of Technology, Mechanical**

June 2015

*Dr. A.P.J. Abdul Kalam Technical University, Lucknow, India.*

- **Bachelor's thesis:** Principles of magnetic levitation and their applications.

**Language and Other Skills**

- English-C1/C2, German-B1/B2
- MS. Office Suite, CCNA Certified, and ArcGIS Certified