

NEERAJ CHAUHAN

Berlin, Germany

chauhanneeraj170@gmail.com • (+49) 1776065065 • [LinkedIn Profile](#) • [GitHub Profile](#)

EDUCATION

Freie Universität Berlin

Master of Science (Data Science)

Berlin, Germany

Oct 2022 – Current

Department of Information Technology, Thakur College of Engineering and Technology

Bachelor of Engineering (Information Technology)

Mumbai, India

Aug 2018 – May 2022

CGPA: 9.27 / 10.00

EXPERIENCE

WellBee HealthCare

Web Developer Intern

Mumbai, India

Dec 2021 – Jan 2022

- Tailored a web application using the Django framework, implementing a robust MVT (Model-View-Template) architecture for seamless backend functionality.
- Leveraged HTML5, CSS, and Bootstrap to design and enhance a responsive, user-friendly front end, ensuring optimal performance and aesthetic appeal.

Sahu Technologies

Working Student

Mumbai, India

May 2021 – June 2021

- Developed and maintained websites and web applications by working on both front-end and back-end components.
- Acquired hands-on experience with frameworks such as ReactJS and NodeJS, enhancing skills in building and designing dynamic, high-performance applications.

ACHIEVEMENTS

- The Data Scientist's Toolbox ([Coursera](#))
- Structuring Machine Learning Projects ([Coursera](#))
- Neural Networks and Deep Learning ([Coursera](#))
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization, and Optimization ([Coursera](#))
- Responsive Website Basics: Code with HTML, CSS, and JavaScript ([Coursera](#))
- The Complete Python Programming Course (Udemy)

PROJECTS

Deep Learning for Hen Segmentation and Movement Tracking

python, YOLO, BoT-SORT, opencv

- Automated the detection, segmentation, and tracking of hens from a given video file.
- Incorporated YOLO's auto-annotator to label frames for image segmentation tasks.
- Conducted custom training of the YOLOv8x-seg model to enhance segmentation accuracy and saved the model for further real-time segmentation and detection.
- Carried out tracking using the best model weights to optimize performance.

Obesity Prediction

python, streamlit, SHAP, scikit-learn

- Developed a predictive web application using ‘streamlit’ to assess obesity levels based on lifestyle and eating habits.
- Implemented a Random Forest Classifier for accurate predictions, achieving 98% accuracy.
- Integrated features for data exploration and model explainability, utilizing visualizations and interactive elements to enhance user engagement.
- Oversaw data preprocessing and feature engineering to improve model performance and interpretability.

Handwritten Text Recognition using AI

python, tensorflow, opencv

- Implemented a Handwritten Text Recognition (HTR) system using deep learning techniques with TensorFlow.
- Harnessed Convolutional Neural Networks (CNNs) for feature extraction from images of handwritten documents.
- Applied Recurrent Neural Networks (RNNs) to model sequential dependencies in handwriting data.
- Employed Connectionist Temporal Classification (CTC) for accurate text recognition without the need for pre-segmented data.

Quantum-Chemical Insights from Molecular Data

python, scikit-learn, scipy

- An ML project that investigates the correlation between molecular geometry and atomization energy.
- Trained a custom Ridge Regression model on simple and complex representations of molecules of the ‘QM7 Dataset’.
- Applied explanation techniques to reflect on the underlying mechanics of the molecule that contributed to the prediction and checked that against existing chemistry literature.

Leaf Specimen Attributes Analysis

python, torch, scikit-learn

- Analyzed a dataset of leaf specimen attributes to uncover patterns and anomalies using advanced machine learning techniques.
- Utilized pre-trained VGG-16 for feature extraction from images, enhancing model accuracy and introduced a ‘BiasedLayer’ to improve the robustness of gradient-based explanations by modifying layer parameters during forward propagation, enhancing model explainability.
- Thoroughly examined the model performance and the quality of explanations

SKILLS

Languages: C, C++, Python, Java, JavaScript, SQL, R

Web Development: HTML5, CSS3, React, node, Bootstrap

Data Visualization: Tableau, PowerBI

Databases: MySQL, MongoDB, PostgreSQL

Others: git, Linux, Docker

Verbal: English (Business Fluent, C1), Hindi (Native), German (Beginner, A2)