Sarthak Pandit

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GitHub | LinkedIn

Education

J.K. Lakshmipat University, Jaipur (Rajasthan)

Student
Bachelor of Technology in Computer Science and Engineering (2023-2027)
CGPA: 8.075 (1st year)
CGPA: 8.619 (2nd year)

Indian Institute of Technology, Jodhpur (Rajasthan)

Student
Bachelor of Technology in Computer Science and Engineering (2025)
Completed my 4th Semester of B.tech at IIT Jodhpur, participating in the Semester Exchange Program

CGPA: 7.02 (4th Semester)

Ryan International School, Indore (Madhya Pradesh)

PCM-CS Student
X: 92% (2021)
XII: 86% (2023)

Technical skills

Python

- Numpy
- Pandas
- Matplotlib
- DataFrame
- Sklearn
- Seaborn
- FaceMesh
- MediaPipe

C/C++

- C Programming
- Data Structures and Algorithms (DSA)
- Object Oriented Programming (OOPs)
- Competitive Programming

Java

- Java Programming
- DSA in Java

Machine Learning (IIT Jodhpur)

- Mathematics for ML (Probability and Statistics, Calculus, Linear algebra)
- Data Handling (Data Cleaning, Exploratory Data Analysis (EDA))
- Programming Basics (Python for ML: NumPy, Pandas, Matplotlib, Seaborn and many more, Introduction to Jupyter/Google Collab Notebooks)
- Supervised Learning (Linear Regression, Logistic Regression, Decision Trees)
- Model Evaluation (Cross-Validation, Performance Metrics (Accuracy, Precision, Recall, F1 Score, ROC, AUC))
- Parameter Estimation: Maximum Likelihood and Bayesian Parameter Estimation
- Feature Selection and Dimensionality Reduction: PCA, LDA, ICA, SFFS, SBFS
- Artificial Neural Networks: MLP, Backprop, and RBF-Net
- Kernel Machines: Kernel Tricks, Support Vector Machines (Primal and Dual forms), K-SVR, K-PCA
- Clustering: k-means clustering, Gaussian Mixture Modeling, EM-algorithm

Structured Query Language (SQL)

Projects

Steganography(Machine Learning) – IIT Jodhpur

- Description: Developed a system to hide messages within images using Steganography to ensure secure data transmission
- Technologies Used: Python, OpenCV, PIL
- Outcome: Learned to implement data encryption in images, enhancing skills in image manipulation and security

Driver's Drowsiness Detection (Deep Learning)

- Description: We have developed a Real-Time Driver Drowsiness Detection System using MediaPipe, FaceMesh, and two lightweight PyTorch Convolutional Neural Network (CNN) Classifiers
- Technologies Used: Python, Pytorch, FaceMesh, MediaPIpe, CNN
- Outcome:Learned how to apply CNN, Deep learning concepts in real life situations

Python Face Detection System

- Description: A face detection system in which the user's face along with his or her name gets stored and can be viewed later on to identify and locate human faces within digital images
- Technologies Used: Python modules such as (cv2, os, tkinter, PIL and many more)
- Outcome: Learned how to store name and faces of user using Python so that the data could be safe of an individual

Stroke Prediction (Machine Learning) – IIT Jodhpur

- Description: Developed a predictive model using machine learning techniques to assess stroke risk based on patient health data, achieving high accuracy in early detection
- Technologies Used: Python modules such as (Pandas, NumPy, Scikit-learn, Tensorflow and Matplotlib)
- Outcome:Learned to effectively analyze healthcare data, apply machine learning algorithms for stroke prediction

Leaf Classification (Machine Learning) – IIT Jodhpur

- Description: Created a Machine Learning model to classify different leaf types based on their images.
- Technologies Used: Python, Tensorflow, Scikit-learn and many more
- Outcome: Gained expertise in image processing and Machine Learning, achieving accurate classification of plant species.

AI Gym & Fitness Assistant (Artificial Intelligence) – Unlox

- Description: The AI Gym & Fitness Assistant aims to revolutionize personal fitness management using Artificial Intelligence. This unified system integrates workout detection, diet planning, behavior tracking, smart gym assistance, and conversational AI for motivation and guidance
- Technologies Used: Built using HTML, CSS, JavaScript
- Outcome: The project's goal is to create an all-in-one AI ecosystem that understands, adapts, and enhances user fitness journeys.

Capstone Project (Machine Learning) – Launched Global

- Description: A machine learning–based salary prediction system that uses applicant data (experience, education, skills, location, etc.) to automatically predict fair and unbiased salary offers. This reduces human judgment and ensures consistency in HR decision-making
- Technologies Used: Built using Python with Pandas, NumPy, Matplotlib, and Scikit-learn for data preprocessing, model training, evaluation, and visualization
- Outcome: Successfully developed and compared multiple regression models (Linear Regression, Decision Tree, Random Forest, and SVM). Random Forest achieved the best performance, proving that ML can bring fairness, accuracy, and efficiency to salary prediction

House Price Prediction System (Machine Learning)

- Description: A machine learning–based House Price Prediction System that uses historical housing data (location, size, number of rooms, etc.) to estimate property prices accurately. The system helps buyers, sellers, and real estate agents make informed decisions.
- Technologies Used: Built using Python, Pandas, NumPy, Matplotlib, and Scikit-learn. Algorithms like Linear Regression, Decision Tree, and Random Forest were implemented and compared for performance.
- Outcome: Successfully developed a predictive model with high accuracy, enabling reliable estimation of house prices and providing valuable insights into key factors influencing real estate values.

Fake News Detection System (Machine Learning)

- Description: A machine learning–based Fake News Detection System that analyzes news articles (text data) to classify them as either *Fake* or *True*. The system helps readers, researchers, and media organizations verify the authenticity of news and combat misinformation
- Technologies Used: Built using Python, Pandas, NumPy, Matplotlib, Seaborn, and Scikit-learn. Machine learning algorithms such as Logistic Regression, Naïve Bayes, Decision Tree, Random Forest, and Support Vector Machine (SVM) were implemented and compared for performance
- Outcome: Successfully developed and evaluated multiple models, generating performance metrics such as Accuracy, Precision, Recall, and F1-score. Visualization through confusion matrices and bar charts provided insights into model effectiveness, helping identify the most reliable algorithm for detecting fake news

Certifications

- Udemy DSA in Java Certificate
- Coursera Python Certificate
- Great Learning Java Programming Certificate
- Udemy C Certificate
- Udemy DSA in C Certificate
- Coursera C Certificate
- IIRS Outreach Program Course Certificate
- MySQL Course Certificate
- Java Assessment Certificate Course
- Udemy HTML CSS JS Certificate
- Deep Learning NVIDIA Certificate
- Harvard University Machine Leaning Certificate
- Python Kaggle Coder Certificate
- Geeks For Geeks Mastering Generative AI and ChatGPT Certificate

Internships

- **CollegeTips.in (Bhopal):**
  Field: Artificial Intelligence and Machine Learning
  Duration: 1 Month
  Stipend: 10,000/Month
  Certificate Link: Internship Certificate CollegeTips.in
  Contribution: Done individual tasks of artificial Intelligence and Machine Learning which helped to grab more knowledge and skills
- **Launched Global (Bangalore):**
  Field: Artificial Intelligence and Machine Learning
  Duration: 2 Month
  Stipend: 15,000/Month
  Certificate Link: Internship Certificate Launched Global
  Internship Course Completion Certificate
  Contribution: Made a machine learning–based salary prediction system that uses applicant data to automatically predict fair and unbiased salary offers. This reduces human judgment and ensures consistency in HR decision-making
  Reward and Recognition: Selected among the Top 20 project creators across IITs, NITs, and IIITs during this internship; awarded a Tablet and a 2-month AI internship extension at Unlox Company. Recognized by JK Lakshmipat University's official LinkedIn page for outstanding performance and innovation in the field of Artificial Intelligence
  Link to official Linked Page of JK Lakshmipat University
- **Suvidha Foundations (Nagpur):**
  Field: Artificial Intelligence and Machine Learning (Research)
  Duration: 2 Month
  Stipend: Unpaid
  Certificate Link: Suvidha Foundations Research Internship Certificate
  Contribution: Did a research Internship in Machine Learning focused on cross linguistic pragmatics, developing computational models to analyze features like politeness, irony and stance in multilingual news corpora using AI evaluation and benchmarking techniques
- **Unlox (Bangalore):**
  Field: Artificial Intelligence
  Duration: 2 Month
  Stipend: 15,000/Month
  Certificate Link: Ongoing
  Contribution: Developed a comprehensive AI Fitness Platform integrating computer vision pose estimation for real-time exercise form analysis with intelligent diet planning and habit tracking systems. Implemented MediaPipe-based squat counter with performance analytics, virtual AI gym buddy, and personalized gym recommendations to optimize fitness outcomes through multimodal AI techniques
  Deployed Link**:** AI Fitness Platform