

HIMANSHU KUMAR BHAGAT

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Computer Science undergraduate specializing in Artificial Intelligence and Machine Learning at Chandigarh University. Proficient in Python and SQL, with hands-on experience in building real-world AI projects across domains like healthcare, media, and creative generation. Skilled in deep learning, machine learning and data analysis, backed by research and impactful applications. Eager to contribute to cutting-edge projects in AI, data science, and Large Language Models (LLMs).

EDUCATION

CHANDIGARH UNIVERSITY

Bachelor of Engineering in Computer Science and Engineering (AI & ML)

Punjab, India

2022-2026

DAV CENTENARY PUBLIC SCHOOL

Class 12 – 75.4%

Class 10 – 89.8%

New Delhi, India

2021

2019

TECHNICAL SKILLS

- **Languages:** Python, SQL
- **AI/ML:** Machine Learning, NLP, Deep Learning (TensorFlow), Computer Vision.
- **Large Language Models (LLMs):** Transformer architecture implementation, prompt engineering, text generation, model fine-tuning, instruction-following behavior, LLM-based voice assistants, conversational AI, report summarization, multilingual response generation, and end-to-end pipeline design using open-source LLMs.
- **Data Analysis:** Pandas, NumPy, Matplotlib, Seaborn, Excel (PivotTables, Power Query, Dashboards)
- **Data Engineering & ETL:** PySpark, Azure Data Factory, Databricks
- **Business Intelligence:** Power BI (DAX, Data Modeling, Transformations)
- **Databases:** SQL, DBMS
- **Cloud Platforms:** Microsoft Azure
- **Data Structures & Algorithms:** Strong theoretical understanding (Arrays, Linked Lists, Trees, Graphs, Heaps, Queues, Stacks)

RESEARCH & PUBLICATION

“Enhanced Rice Leaf Disease Detection: A Hybrid Deep Learning Approach”

Published in International Journal of Scientific Research in Engineering and Management, Volume 09, Issue 04, April 2025.

DOI: 10.55041/IJSREM46332

INTERNSHIP EXPERIENCE

Artificial Intelligence Intern

February 2023 – March 2023

AICAN Private Limited

Remote

- Conducted Exploratory Data Analysis (EDA) on Titanic dataset leveraging Python libraries (Pandas, NumPy, Seaborn) to uncover survival patterns across demographics.
- Improved dataset quality by 20% through preprocessing, handling missing values, outlier detection, and feature engineering.
- Achieved 95% accuracy in identifying survival factors; developed visual reports enhanced stakeholder understanding.
- Delivered actionable insights through statistical analysis, contributing to 15% improvement in predictive decision-making.

ACADEMIC PROJECTS

MedInstructAI – Multilingual Medical Report Explainer – Built an AI assistant that reads medical reports from text, image, or PDF and explains them in simple, layman-friendly language. Enabled multilingual voice output, follow-up Q&A, and real-time risk detection for serious health conditions. Designed to bridge healthcare communication gaps in low-resource and rural settings.

AI News Anchor Video Generator – Created a fully automated pipeline that fetches real news, writes anchor-style scripts, generates realistic speech, and produces complete news videos with AI avatars and visuals. The system simulates a virtual presenter without any human input. Demonstrates the future of autonomous, AI-powered journalism.

AI Poetry Generator – Developed a generative AI system by implementing a transformer-based language model architecture from scratch and fine-tuning it on a custom poetry dataset. Built custom training workflows and tokenizer integration under computational limitations. Demonstrates deep understanding of model internals, text generation, and personalized LLM development.

Hybrid Deep Learning Model for Rice Leaf Disease Detection – Developed hybrid model combining ResNet50v2 with custom connected network for automated rice leaf disease detection. Trained model on 15,023 images leveraging data augmentation techniques such as rotation, zoom, and flipping. Achieved 99.53% accuracy by applying batch normalization, dropout, and L2 regularization—surpassed existing benchmarks and enabled timely identification of crop diseases.

Sentiment Analysis Using VADER – Created a sentiment analysis model using VADER to classify customer reviews as positive, neutral, or negative. Applied NLP techniques for text preprocessing and tokenization. Demonstrated how sentiment insights could inform product feedback analysis and enhance user experience strategies.

CERTIFICATIONS

- Microsoft Certified – Azure AI fundamentals
- Oracle Cloud Infrastructure – Generative AI
- Data Analytics – LearnTube.ai & CareerNinja
- Python Essentials 1&2 – Cisco Networking Academy in collaboration with Python Institute
- Artificial Intelligence Foundations: Machine Learning – LinkedIn Learning - NASBA
- Introduction to Data Science – Infosys
- Introduction to Natural Language Processing – Infosys
- Python Data Structures, University of Michigan – Coursera
- Capstone: Retrieving, Processing, and Visualizing Data with Python, University of Michigan – Coursera
- Machine Learning for All, University of London – Coursera