

# Ayush Kumar

+91 8092295572 | ak1357kumar@gmail.com | GitHub

## TECHNICAL SKILLS

**Programming Languages:** C++, Python

**Libraries & Tools:** NumPy, Pandas, Scikit-learn, OpenCV, TensorFlow, Keras, Matplotlib, Seaborn

**CS Fundamentals:** DBMS, Computer Networks, Operating System

**Soft Skills:** Team-Player

## EXPERIENCE

### Data Science Intern

May 2025 – Aug 2025

*Fresenius Digital Technology – Remote*

India

- Built and deployed machine learning models that increased prediction accuracy by 15% for internal data-driven solutions, contributing to faster and more reliable insights for business decision-making
- Developed and optimized Retrieval-Augmented Generation (RAG) pipelines using Python, improving response accuracy by 18% and reducing retrieval latency by 12%, enhancing overall system performance for generative AI applications

## PROJECTS

### CNN-Based Kidney Disease Classification from CT Scans

Aug 2024 – Dec 2024

*Deep Learning Project – Individual Project*

*TensorFlow, Keras, OpenCV*

- Achieved 97% accuracy in classifying 4 kidney conditions using a custom CNN architecture with attention mechanisms
- Enhanced model sensitivity by 7% through strategic data augmentation and class imbalance techniques

### Pneumonia Detection from Chest X-rays Using CNN

Jan 2024 – Jun 2024

*Deep Learning Project – Group Leader*

*TensorFlow, Keras, OpenCV*

- Developed CNN model achieving 90.5% accuracy using optimized Conv2D/MaxPooling architecture
- Processed 5,856 X-rays with advanced preprocessing (normalization, augmentation) to combat overfitting

### Heart Disease Predictor Using ML Algorithms

Aug 2023 – Dec 2023

*Machine Learning Project – Individual Project*

*Scikit-learn, Pandas, NumPy*

- Identified Random Forest as optimal model (98% accuracy, AUC 0.98) through comparative algorithm analysis
- Utilized SHAP analysis to determine key clinical predictors (cholesterol, ST depression) for model interpretability

## EDUCATION

### VIT Bhopal University

*B.Tech. in Computer Science – CGPA: 8.54*

Bhopal, Madhya Pradesh

2022 – 2026(Expected)

### Oxford Public School

*XIIth Standard - Percentage: 84.4%*

Muzaffarpur, Bihar

2021 – 2022

### DAV Public School

*Xth Standard - Percentage: 88%*

Muzaffarpur, Bihar

2019 – 2020

## CERTIFICATIONS

- NPTEL - Cloud Computing Certificate, Marketing Analytics Certificate
- GenAI by IBM Adroit

## EXTRA CURRICULAR ACTIVITIES

- Core Member, Android Club (College)
- Ranked 46th out of 1000 teams in Shell.ai Hackathon Fuel Blend Properties Prediction Challenge