

# AYUSHMAN CHAKRABORTY

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

## Profile Summary

AI/ML-focused Computer Science undergraduate with hands-on experience building production-grade GenAI, NLP, and computer vision systems. Interned at Wipro and 1stop.ai, delivering end-to-end ML pipelines deployed via FastAPI and Docker that reduced manual review effort by 50–60%. Strong background in model evaluation, feature engineering, data leakage prevention, and scalable ML deployment.

## Skills

Languages :	Python, SQL (MySQL, PostgreSQL), TypeScript, C, JavaScript
Machine Learning:	scikit learn, TensorFlow, PyTorch, NLP, Pandas, Numpy, Matplotlib
Generative AI & LLMs :	LLM integration, LangChain, HuggingFace Transformers, RAG, MCP
Computer Vision:	CNNs, YOLOv8, OpenCV, image classification, object detection
Backend & Deployment:	FastAPI, Streamlit, Docker, Git, CI/CD Pipelines

## Work Experience

Data analytics & Gen AI InternJun 2025 - Jul 2025

Wipro (Bengaluru, India)

- Engineered an end to end AI automation system converting 30+ long form technical videos into blogs with code snippets.
- Architected a multimodal pipeline utilising OpenAI Whisper for STT and GPT-4o for semantic reasoning, reducing end-to-end processing latency by 40% (from 12s to 7s per video segment) through prompt compression and few-shot optimization.
- Maintained a 98% consistency score in technical blog generation by implementing an LLM-based verification layer using Azure OpenAI, reducing manual editor intervention by 60%.
- Containerized the solution using Docker and built a Streamlit dashboard, enabling non-technical stakeholders to generate production-ready blogs independently.

Data Science InternJul 2024 - Sep 2024

1stop.ai (Remote)

- Analyzed 50,000+ financial records using Python/Pandas to identify high-risk patterns, providing data-driven decision support for lending simulations.
- Built and optimized supervised ML models for SMS spam and hate speech classification, achieving ~92% accuracy.
- Designed an LLM based text summarization pipeline, reducing manual document review effort by ~60%.
- Implemented reproducible ML workflows using scikit learn and Azure OpenAI

## Project Work

### 3D Cricket Bowling Pose & Human Mesh Recovery (December-2025)

- Built a cricket specific monocular 3D pose and human mesh recovery pipeline, detecting the bowler via YOLO based action scoring and reconstructing SMPL based 3D meshes using SPIN from delivery frames.
- Implemented automatic ball release frame detection and recovered 24 joint skeletal representations for accurate bowling biomechanics analysis.
- Computed cricket specific metrics including elbow legality, shoulder hip separation, spine tilt, and injury risk indicators using pose accurate geometry.
- Optimized CPU only inference and exported structured outputs with 2D skeletons and 3D mesh visualizations for downstream analysis.

### Car Crash Damage Detection & Severity Classification (June -2025)

- Developed a computer vision pipeline using CNNs, YOLOv8, and OpenCV to localize vehicle damage regions and classify severity from crash images.
- Trained and evaluated models on labeled datasets across multiple damage categories, accounting for class imbalance and inter class ambiguity.
- Integrated an LLM driven reporting module to automatically generate structured repair summaries from model predictions.
- Deployed the inference system using FastAPI, Docker, and Streamlit for reproducible execution and low latency testing.

## Education

- Manipal Institute Of TechnologyJul 2023- Expected 2027  
B.Tech in Computer Science with specialization in Data Science

## Certifications

- AI Engineer For Data Scientists (Datacamp 2025) [Link](#)
- MLOps Deployment and Life Cycling (Datacamp 2025) [Link](#)
- Model Context Protocol (Anthropic 2025) [Link](#)