Udit Aggarwal

New Delhi, IN | +91-8800201753 | uditagg2004@gmail.com | LinkedIn | GitHub | Portfolio

SUMMARY

Software Engineer specializing in Machine Learning, mobile development, .NET, and enterprise systems optimization. Expertise includes CNN models, transfer learning, and ML/API deployment (Flask). Interested in Java development and AI engineering. Proficient in software architecture, DSA, OOP, and building scalable, multi-platform solutions across mobile, ML, and backend ecosystems.

EDUCATION

B.Tech Computer Science & Engineering ***Expected June 2026***
CGPA: 7.39
Amity University, Noida

SKILLS

- **Programming Languages:** Python, Java, C++, C#
- **Machine Learning & AI:** PyTorch, Scikit-learn, CNNs, Transfer Learning, Data Preprocessing, Model Deployment, Pandas
- **Tools & Platforms:** Git, GitHub, Linux, Docker, VS Code. **Frameworks:** Flask, .NET MAUI, Android Studio

EXPERIENCE

Enterprise Software Intern – Future Labs Technology **June – September 2025**

- **Optimized enterprise workflow, automation**, reducing manual processing time by redesigning legacy data modules.
- **Engineered custom data models and optimized database queries**, resulting in significant performance gains for high-volume reporting.
- **Debugged and maintained production-grade software**, identifying and resolving critical logic errors in live environments.

PROJECTS

Distributed Linux Media System (Android Studio/JAVA) **December 2025**

- Engineered a **high-performance, bi-directional remote control system** bridging an **Android Client and Arch Linux Host** over raw **TCP Sockets**.
- Developed a **multi-threaded server** architecture implementing **predictive caching to preload** the next song, achieving zero-latency playback between tracks.
- Managed **kernel-level processes (`mpv`, `yt-dlp`) using Java's `ProcessBuilder`** for direct system control and designed a modern "Glassmorphism" UI in Android XML.

Digital Twin System for Rumor Analysis (PyTorch, LLM) **October 2025**

- **Engineered a threat-scoring NLP pipeline** to detect misinformation, utilizing **Transfer Learning** on pre-trained Transformer architectures to classify text severity.
- **Developed predictive modules** for sentiment and virality analysis, enabling the system to quantify the potential propagation speed of rumors in real-time.
- **Optimized model performance** through fine-tuning, achieving **94.51% accuracy** in stance detection and **93.4%** in sentiment classification on complex social media datasets.

Pneumonia Detection System (PyTorch, CNN) **September 2025**

- Trained a **ResNet18** model using **Weighted Cross-Entropy Loss** to successfully resolve severe dataset imbalance.
- Deployed a **Flask inference API** for real-time X-ray classification with optimized image ingestion pipelines.
- Achieved **96.34% accuracy** by implementing robust data preprocessing and geometric augmentation techniques.

Smart Culinary Assistant (.NET MAUI, C#) **July 2025**

- **Architected a cross-platform mobile application** using **.NET MAUI** and the **MVVM Toolkit**, achieving 90%+ code reusability between Android and Windows environments.
- **Integrated TheMealDB API** to fetch dynamic culinary data, implementing **Async/Await** patterns to ensure non-blocking UI rendering and smooth data binding.
- **Designed a responsive UI with XAML**, utilizing CollectionView for optimized list scrolling and custom data templates for a polished user experience.