Ashutosh Kumar Pandey

📞 +91 7571068452 | ✉ ap3071674@gmail.com | 🔗 linkedin.com/in/cloudmonks | 🐙 github.com/ashutosh

Education

G L Bajaj Institute of Technology and Management — Greater Noida, UP
Master of Computer Applications — *Aug. 2025 – May 2027*

University of Allahabad — Prayagraj, UP
Bachelor of Computer Applications — *Aug. 2021 – May 2024*

Experience

Software Developer — Aug. 2024 – Oct. 2025
Computronics Lab — *Greater Noida, UP*
- Built **AI-powered Avatar Agent** (GPT + TTS + SadTalker) for real-time lip-synced interactions.
- Developed company websites using **HTML/CSS/JS** and Flask/PHP backend.
- Collaborated with **8+ member team** on IoT + AI solutions; improved efficiency by 25%.
- Created **ESP32-S3 EV-style dashboard** with LVGL and Google Maps API.

Associate Application Developer — Jan. 2024 – Jul. 2024
Mahadhyuta Ed Tech — *Odisha, India*
- Developed **Woof Monitor** app (Flutter + Firebase + MQTT) for real-time pet health tracking.
- Implemented push notifications, vaccination reminders, and improved app performance by 30%.

Intern - Application Developer — Sept. 2023 – Dec. 2023
Mahadhyuta Ed Tech — *Odisha, India*
- Assisted in cross-platform Flutter apps with Firebase Auth & Realtime Database.
- Built modular UI components and contributed to debugging and performance optimization.

Projects

AI Agent Avatar System — Python, Flask, WebSocket, GPT, TTS, SadTalker — 2025
- Developed a **real-time AI-powered avatar** capable of interactive conversations using GPT and Speech Recognition with **TTS integration** for natural voice responses.
- Integrated **SadTalker** to generate lip-synced avatar video in real-time, deployed via **Flask backend** and **WebSocket streaming** for smooth performance.

Woof Monitor (Pet Care App) — Flutter, Firebase, MQTT — 2024
- Developed a **cross-platform Flutter app** for real-time pet health monitoring, integrating **MQTT protocol** for instant data updates.
- Implemented features like vaccination reminders, activity tracking, diet logging, and push notifications via Firebase Cloud Messaging.
- Integrated **ML models** for anomaly detection in pet activity and health patterns, providing proactive alerts to owners.

Smart EV Dashboard — ESP32-S3, LVGL, Google Maps API — 2024
- Designed an **interactive EV-style dashboard** for ESP32-S3 displaying speed, battery, GPS, and navigation info.
- Integrated Google Maps Static API for embedded route visualization and optimized firmware to reduce memory usage.
- Implemented smooth real-time updates using **LVGL graphics library**, enhancing user experience with responsive UI.

Real-Time Object Detection App — Flutter, TensorFlow Lite — 2024
- Built a mobile app capable of detecting and classifying objects in real-time using **TensorFlow Lite**.
- Optimized inference pipeline to achieve 30+ FPS on Android devices, including model quantization and efficient frame processing.
- Integrated Flutter Camera API for seamless on-device image capture and prediction, supporting real-time visualization.

Learning Management System (Freelance) — Python, Flask, HTML/CSS/JS, MySQL — 2023
- Developed a **full-stack LMS web application** with authentication, role-based access, and course management for students and admin.
- Implemented assignment submission, grading, and progress tracking; designed responsive frontend using HTML/CSS/JS with Flask backend.
- Integrated MySQL database with secure queries and optimized backend API endpoints for performance and scalability.

Technical Skills

Languages: Python, C/C++, SQL, JavaScript, HTML/CSS, Java (Basics)

Frameworks/Tools: Flutter, Flask, LVGL, Git, GitHub, VS Code, Arduino IDE, ESP-IDF

Libraries/Packages: pandas, NumPy, Matplotlib, Seaborn, TensorFlow, PyTorch, Scikit-learn, OpenCV

Embedded/Hardware: ESP32, STM32, Arduino, MPU6050, VL53L0X, DHT11, INA219, BLE, GPS Modules

Other Skills: REST APIs, Web Development, Firebase, FreeRTOS, Voice Recognition, TTS, AI/ML Integration