

Akash Kumar

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PROFESSIONAL SUMMARY

Software Engineering candidate specializing in Backend Development, Full-Stack Architecture, and AI-integrated IoT systems. Experienced in engineering scalable web applications and intelligent hardware ecosystems using Python, Flask, ESP32, and Google Gemini API. Proven ability to architect REST APIs, deploy on AWS/Linux cloud infrastructure, and deliver robust software solutions that solve complex real-world problems.

TECHNICAL SKILLS

Languages: C++, C, Python, JavaScript (ES6), Java, SQL

Web & Backend: Flask, RESTful APIs, HTML5, CSS3, MySQL

IoT & AI: ESP32, Arduino IDE, MQTT (HiveMQ), Google Gemini API, Artificial Intelligence

Tools & Infrastructure: Git, GitHub, AWS (EC2, IAM, VPC), Linux, Netlify, Cloud Computing

PROJECTS

AI-Powered Smart Home Automation System

Python, C++, Flask, ESP32, MQTT (HiveMQ), Google Gemini API

- **Architected** an end-to-end IoT ecosystem utilizing ESP32 microcontrollers and a centralized Flask web dashboard, enabling real-time appliance control across desktop and mobile.
- **Integrated** the Google Gemini API to process natural language voice commands in English, Hindi, and Hinglish, significantly improving user accessibility and interaction.
- **Implemented** a hybrid processing model that executes routine commands locally for near-zero latency while dynamically routing complex conversational requests to cloud-based AI.
- **Engineered** a robust publisher-subscriber communication layer using MQTT (HiveMQ) to instantly synchronize appliance states between physical push buttons and the web interface.

Source Code: [GitHub](#) / Live Demo: [Demo Link](#)

Spotify Clone Interface

HTML5, CSS3, JavaScript (ES6)

- **Engineered** a pixel-perfect, fully responsive frontend application replicating Spotify's core interface and user experience.
- **Developed** interactive media controls, seamless playlist navigation, and dynamic queue management utilizing vanilla JavaScript without relying on external frameworks.

- **Optimized** rendering and layout responsiveness to ensure complete UI consistency across desktop, tablet, and mobile devices.

Source Code: [GitHub](#) / Live Demo: [Demo Link](#)

Restaurant Management System

Visual Basic 6.0, SQL Server

- **Led** a four-member engineering team to design and develop a database-backed desktop application tailored for restaurant operations.
- **Designed** relational SQL database schemas and implemented comprehensive CRUD functionality to handle vast daily operational data.
- **Automated** inventory management and dynamic billing generation, improving overall operational efficiency by reducing manual data entry overhead.

INTERNSHIP

DevOps Trainee

2025

Orbique Technologies

- **Managed** AWS cloud services including EC2, IAM, and VPC to establish secure, scalable infrastructure environments.
- **Administered** Linux-based systems and applied cloud deployment fundamentals to streamline continuous integration workflows.
- **Gained** extensive hands-on exposure to DevOps principles, networking, and modern cloud infrastructure architectures.

TRAINING

Data Center Training

Jan 2025 – Mar 2025

Wipro WILP

- **Practiced** advanced routing, switching, and network configuration utilizing Cisco Packet Tracer for simulated environments.
- **Documented** and version-controlled all configurations within a dedicated GitHub repository (Network Routing Project).

EDUCATION

Master of Computer Applications (MCA)

2024 – 2026

Noida Institute of Engineering & Technology, Greater Noida

- **Marks:** 81%

Bachelor of Computer Applications (BCA)

2021 – 2024

Arcade Business College, Patna

- **Marks:** 72.75%

CERTIFICATIONS

- **Programming:** Java, C++ (Spoken Tutorial Project at IIT Bombay)
- **Web Development:** HTML (IIT Bombay), HTML5-The Language (Infosys Springboard)
- **Networking & Security:** CCNA (Cisco), Networking Essentials (Cisco), Introduction to Cybersecurity (Cisco)
- **Cloud & Specialized:** Salesforce Developer (LearNowX Consulting), Linux for Beginners (Infosys Springboard)