

Ashutosh Kumar Singh

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PROFESSIONAL SUMMARY

Computer Science & Engineering graduate (2026) with Honors in Cybersecurity and hands-on experience in **Python, MongoDB, JavaScript, REST APIs, backend development, and AWS**. Strong foundation in **Data Structures & Algorithms, DBMS, API/database concepts, debugging, and software engineering**, with experience building secure full-stack applications, working with authentication and data processing, and deploying applications on the cloud. Self-driven problem solver who learns quickly and enjoys building reliable software.

EDUCATION

B.Tech (Hons.) in Computer Science & Engineering (Cybersecurity)	CGPA: 8.45/10
G.L. Bajaj Institute of Technology & Management, AKTU	2022–2026
Senior Secondary (Class 12) – NIOS	70% 2022

TECHNICAL SKILLS

Programming: Python, JavaScript, Java, C++, C, SQL
Backend & APIs: Node.js, Express.js, REST APIs, JWT Authentication
Data & Databases: MongoDB, SQL, DBMS, Data Processing, Data Validation
Testing & Tools: Debugging, API Testing Concepts, Git, GitHub, Docker, Linux, VS Code
Cloud: AWS, Amazon S3, AWS EC2
Core CS: Data Structures & Algorithms, OOP, Operating Systems, Computer Networks, Software Engineering
Additional: React.js, TensorFlow, XGBoost, OpenCV, NumPy, AES-256, RBAC

PROJECTS

Secure e-Health Record Management System *React.js / Node.js / Express.js / MongoDB / AWS / JWT*

- Built a full-stack healthcare application using **Node.js, Express.js, MongoDB, REST APIs, and React.js** for secure electronic health-record management.
- Implemented **JWT authentication and Role-Based Access Control**, debugging application and API flows to ensure reliable access to records and features.
- Deployed the application on **AWS EC2 & S3** and implemented AES-256 encryption for secure data handling.

Hybrid ML-Based Phishing URL Detection System *Python / XGBoost / DNS Analysis / SSL Analysis*

- Developed a Python-based system combining **URL, DNS, and SSL features** for phishing detection and structured data processing.
- Evaluated outputs using precision, recall, ROC-AUC, and false-positive rate, achieving **99% accuracy** and **<1% false-positive rate**.

AI-Powered Ocular Disease Detection *Python / TensorFlow / OpenCV / NumPy*

- Processed retinal-image data using preprocessing and augmentation to develop a CNN classifier for multiple ocular diseases.
- Evaluated model outputs across multiple metrics, achieving **94% accuracy, 92% sensitivity, and 93% specificity**.

RESEARCH PUBLICATION

A Hybrid Machine Learning and Domain Reputation Framework for Phishing URL Detection
Published in **AJIR (2026)**; proposed a hybrid framework combining XGBoost with DNS and SSL reputation features.

CERTIFICATES

AWS Academy Graduate – Cloud Foundations | Cisco Python Essentials (Beginner & Intermediate)

ACHIEVEMENTS

Runner-Up – Quizathon, GL Bajaj — Strong performance in a college-level quiz competition.
Finalist – Dev-On Hackathon — Reached the final stage through software development and problem solving.
IEEE Member & ICDT 2025 Volunteer — Contributed to technical and conference activities.