

USMAN IBRAHIM

Computer Science Student

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PROFESSIONAL SUMMARY

Computer Science student passionate about software development and building efficient, scalable applications. Experienced in developing end-to-end projects using Python, C++, and Java, with strong understanding of data structures, algorithms, and core computer science fundamentals including DBMS. Skilled in handling data and backend logic using tools like Pandas and Scikit-learn when needed. Eager to contribute to real-world software engineering projects through an internship and grow as a software developer.

EDUCATION

COMSATS University Islamabad, Lahore Campus

2024 – Present

Bachelor of Science in Computer Science (BSCS)

CGPA: 3.54 / 4.00

Relevant Coursework: Data Structures & Algorithms, Database Management Systems, Object-Oriented Programming, Artificial Intelligence, Software Engineering

EXPERIENCE

Magnoos Information Systems

2026

Data Scientist (AI) Intern

LumenSoft Technologies

2026

Full-Stack Developer Intern

TECHNICAL SKILLS

Languages: Python, SQL, C++, Java, JavaScript, HTML5, CSS3

Frameworks & Libraries: Node.js, Express.js, Flask, SQLAlchemy, JavaFX, Scikit-learn, Pandas, PySide6

Databases: SQLite, CSV-based storage, MySQL, SSMS

Concepts: Full-Stack Web Development, REST API Design, WebSockets, OOP, DSA, DBMS, Machine Learning (NLP)

Tools & Platforms: Git & GitHub, VS Code, PyCharm

Soft Skills: Problem Solving, Debugging, Team Collaboration, Analytical Thinking

PROJECTS

Violetron – Gemini RAG Chatbot

Python | Flask | FAISS | Google Gemini API | LLMs

- Architected a Retrieval-Augmented Generation (RAG) pipeline from scratch, integrating Google AI Studio's Gemini models (gemini-1.5-flash) to execute precise, context-aware semantic synthesis over unstructured PDF and TXT data.
- Engineered a local vector database architecture using Meta's FAISS library to generate, store, and query high-dimensional document embeddings (text-embedding-004) with optimized nearest-neighbor search.
- Designed a custom text-processing engine featuring semantic sentence chunking and rolling mathematical token overlaps, eliminating context fragmentation and preserving document boundary logic.

UniBot – University FAQ Chatbot

Python | ML & NLP

- Built a desktop chatbot for university FAQs using TF-IDF Vectorization and Multinomial Naive Bayes for intent classification and confidence-scored response prediction.
- Implemented a full NLP pipeline (text preprocessing, dataset handling) with Scikit-learn and Pandas, wrapped in a PySide6 GUI with real-time typing animations.

ULink – Full-Stack Social Media Platform

Node.js | Express | SQLite | WebSockets | Vanilla JS

- Architected a full-stack social media application from scratch featuring multimedia posts, disappearing stories, story highlights, reels, and a granular privacy system (block, mute, restrict, close friends).
- Engineered a custom WebSocket real-time engine (without third-party libraries) for instant direct messaging, group chats, voice notes, emoji reactions, read receipts, and live notifications - with JWT-authenticated connection pooling.

USMart – Full-Stack E-Commerce Store

Python | Flask | SQLAlchemy | SQLite | Vanilla JS

- Developed a complete e-commerce platform with a dynamic product catalog (12 products, 5 categories), real-time search/filter, interactive shopping cart with guest-to-user cart merging, and full checkout flow.
- Built a secure Merchant Admin Console featuring a live sales analytics dashboard (revenue, active orders, low-stock alerts), order fulfillment state machine, inventory CRUD with local image uploads, and an SVG donut chart for category analytics.

Hotel Reservation & Management System

C++ / DSA

- Engineered a hotel management system leveraging Hash Maps, Queue, Priority Queue, BST, and Linked List for efficient room allocation, booking history, and payment record handling.
- Applied OOP and modular design principles throughout for scalable, maintainable code.

Karim Optical

Web – Real World Delivered 2026

- Web Development & Clinical Portfolio: designing trust in eye care & eyewear through a professional clinical portfolio and eyewear presentation layer.

Karim Connect

Staff System - Real World Delivered 2026

- Staff-Only Customer Management & WhatsApp Automation: a staff-restricted customer management portal integrated with custom CRM tools and WhatsApp messaging automation.