AMMARAH UMER

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PROFESSIONAL SUMMARY

BS Computer Science student (4th Semester) at Iqra University with strong analytical thinking, problem-solving abilities, and a solid foundation developed through academic projects. Continuously expanding technical skills through hands-on learning and practical application. Interested in Software Engineering and Artificial Intelligence, with a keen interest in building scalable software solutions and exploring emerging technologies.

EDUCATION

Bachelor of Science in Computer Science (BSCS)
Iqra University – Airport Campus, Karachi

Intermediate (Pre-Medical)
Khursheed Govt. Girls Degree College, Karachi

Matriculation (Science-Medical)
Nasra Public School, Karachi

TECHNICAL SKILLS

Programming Languages: C, C++, C#, Java, Python, x86 Assembly
Web Technologies: HTML, CSS, JavaScript (ES6), React, Vite
Databases: SQL Server LocalDB, SQL Fundamentals
Tools & Platforms: Visual Studio, VS Code, MASM/Irvine32, Cisco Packet Tracer, Git & GitHub
Concepts: OOP, Data Structures & Algorithms, Networking (VLANs, DHCP, DNS), Responsive Web Design (CSS Grid, Flexbox), Component-Based Architecture, State Management (Context API), Debugging

ACADEMIC PROJECTS

AI Chatbot for Customer Support *C#, Windows Forms, SQL Server LocalDB*

- Built a bilingual (English & Roman Urdu) desktop chatbot for a footwear store, automating responses to common customer queries using conditional logic and basic NLP techniques.
- Implemented secure user authentication and persistent chat-history management using SQL Server LocalDB.

Crime Investigation & Suspect Tracking System (CISTS) *Java, Java Swing, Data Structures*

- Developed a desktop application to manage criminal records, suspects, and evidence with full add/update/delete/search functionality.
- Applied data structures to optimize data organization and retrieval through an intuitive Java Swing interface.
- **GitHub:** https://github.com/ammarahumer/crime-investigation-system

Smart CPU Task Scheduler & Execution Simulator *x86 Assembly, MASM, Irvine32*

- Engineered a priority-based CPU scheduling simulator in x86 Assembly, modeling core operating system concepts.
- Implemented Bubble Sort-based task prioritization, execution simulation, and real-time performance statistics.
- **GitHub:** https://github.com/ammarahumer/smart-cpu-task-scheduler

Huffman Compression Suite *Huffman Coding, Binary Trees, Priority Queues*

- Built a lossless text compression/decompression tool using the Huffman Coding algorithm.
- Applied binary trees and priority queues to optimize compression ratio and storage efficiency.

Smart Enterprise Network *Cisco Packet Tracer, VLANs, DHCP, DNS*

- Designed and simulated a secure, scalable enterprise network configuring VLANs, Inter-VLAN routing, DHCP, DNS, FTP, and web/email servers.
- **GitHub:** https://github.com/ammarahumer/smart-enterprise-network

Personal Software Engineering Portfolio Website *HTML, CSS3, JavaScript (ES6)*

- Designed and built a fully responsive, recruiter-facing portfolio website from scratch using only HTML5, CSS3, and vanilla JavaScript, with an IDE-inspired visual identity, dark/light theme toggle, and animated scroll interactions built with the Intersection Observer API.
- Implemented client-side form validation, a responsive hamburger navbar, and CSS Grid/Flexbox layouts across three breakpoints; deployed publicly via GitHub Pages. (https://ammarahumer.github.io/portfolio-website/)

TaskBoard — React To-Do Application *React 18, Vite, Context API, CSS3*

- Built a responsive to-do list application in React with functional components and hooks, using the Context API for global state management (add, complete, delete tasks) without external libraries like Redux.
- Implemented Local Storage data persistence, live task counters, and a modular component structure (TaskContext, TaskInput, TaskList, TaskItem) with a fully responsive, mobile-first UI.
- Deployed publicly via GitHub Pages. (https://ammarahumer.github.io/react-todo-app/)

LANGUAGES

English (Fluent) | Urdu (Native)