

Babar Ali

Computer Science Student | C++ C# Python SQL | Data Enthusiast
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Summary

Computer Science undergraduate with hands-on experience in C++, C#, Python, and SQL. Built real-world projects including a Gym Management System (.NET, SQL) and Football Data Analysis (Python, Pandas). Strong in problem-solving, database management, and software development, with a focus on creating efficient and user-friendly applications. Seeking opportunities to contribute technical expertise and grow within a dynamic software engineering team.

Education

University of Management and Technology (UMT), Lahore	Punjab, Pakistan
Computer Science Bachelors	Oct 2022-Present
Punjab College, Lahore	Punjab, Pakistan
FSc (Pre-Engineering)	Oct 2020 - Jul 2022
The Fast School System, Lahore	Punjab, Pakistan
Matriculation	Mar 2018 - Mar 2020

Skills

Programming Languages:	C++, Python, C#, HTML, CSS
Libraries/Frameworks:	.NET, Pandas, NumPy, Matplotlib, Seaborn
Tools / Platforms:	DevC++, Visual Studio, VS Code, Jupyter Notebook, Google Colab, Emulator8086, Figma
Databases:	SQL

Projects

Tic-Tac-Toe Game	C++ (Object-Oriented Programming), Classes & Objects
Designed and implemented a two-player Tic-Tac-Toe game using Object-Oriented Programming principles in C++. Applied concepts such as classes, objects, and encapsulation to manage the game board, player turns, and win/draw detection logic.	
Library Management System	C++ (Data Structures & Algorithms), AVL Trees, Binary Search Trees, File Handling, Object-Oriented Programming (OOP)
Designed and implemented a console-based Library Management System utilizing advanced data structures, including AVL trees and BSTs, for efficient storage and retrieval of book records. Features include secure user authentication, CRUD operations on book data, real-time borrowing and returning, availability checks, and persistent storage via file handling. Optimized search, insertion, and deletion operations to maintain logarithmic time complexity.	
Gym Management System	C#, SQL, .NET
Developed a desktop-based Gym Management System using C# and the .NET framework, featuring member registration, trainer assignment, attendance tracking, and subscription management. Implemented a SQL database for secure storage and retrieval of user and payment records. Designed and integrated user-friendly forms and workflows to streamline daily gym operations and improve management efficiency.	

Football Match Data Analysis	Python (Pandas, NumPy, Matplotlib, Seaborn), Jupyter Notebook
Performed exploratory data analysis (EDA) on an international football match dataset to uncover patterns in player performance, goals scored, and event distribution across matches. Cleaned and preprocessed data using Pandas, handled missing values, and derived key insights such as top goal scorers, event frequency, and match statistics. Visualized findings with Matplotlib and Seaborn to present trends in a clear and interpretable format.	