

# Saniya Hassan

Software Engineering Student — NUST

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## PROFILE

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Second-year Software Engineering student at NUST with strong foundations in Data Structures, Algorithms, and backend systems. Demonstrated academic excellence as a former board topper. **Actively seeking internships in backend development, system design, and space-tech related software roles.**

## EDUCATION

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- **National University of Sciences and Technology (NUST)**  
*BS Software Engineering* 2024 – 2028 | CGPA: **3.56**
- **Superior College Bahawalpur**  
*FSc Pre-Engineering — Board Topper (95%)* 2022 – 2024
- **Umm-ul-Qura Public School, Bahawalpur**  
*Matriculation — 99%* 2020 – 2022

## TECHNICAL SKILLS

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- **Programming Languages:** C++, Java (OOP), Python
- **Core Computer Science:** Data Structures and Algorithms, System Design, OOP
- **Backend & Web:** FastAPI, REST APIs, React, HTML, CSS
- **Tools & Platforms:** Git, GitHub, Linux, Azure Virtual Machines, LaTeX
- **Languages:** Urdu (Native), English (Fluent)

## PROJECTS

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- **LUNACY — NASA NeoWs Space Visualization System**  
*Godot Engine, NASA NeoWs API, Data Automation*
  - Developed a 3D visualization system for near-Earth asteroid trajectories using live NASA NeoWs data.
  - Integrated automated data pipelines for real-time scientific visualization.
  - Designed the system to improve public awareness and understanding of asteroid monitoring.
- **Academic Search Engine (DSA-Based System)**  
*C++, Custom Indexing, Trie Autocomplete, Azure Deployment*
  - Built a large-scale academic search engine using custom forward and inverted indexing techniques.
  - Implemented Trie-based autocomplete and a multi-factor document ranking algorithm.
  - Optimized memory usage and deployed the backend on a Microsoft Azure virtual machine.
- **Visitor & Employee Management System**  
*FastAPI, React (Vite), MySQL*
  - Designed and developed a secure full-stack system reflecting real organizational workflows.
  - Implemented visitor logging, employee attendance, and salary computation modules.
  - Added role-based access control, audit logs, and report generation features.

- **Learning Sphere — Java OOP Application**

*Java, Object-Oriented Design*

- Developed a desktop application demonstrating core OOP principles including inheritance, polymorphism, and encapsulation.

- **Responsive Portfolio Website**

*HTML, CSS*

- Designed a responsive personal portfolio website with clean UI and cross-device compatibility.

## CERTIFICATIONS

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- NASA International Space Apps Challenge 2025 — *Galactic Problem Solver*
- Introduction to Git and GitHub — Coursera
- Google Crash Course on Python — Coursera
- Using Python to Interact with the Operating System — Google (Coursera)
- AI for Everyone — Coursera

## ACHIEVEMENTS

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- NASA Space Apps Hackathon — Global Nominee (Top teams worldwide)
- Board Topper in FSc Pre-Engineering (95%) and High Distinction in Matriculation (99%)

## LEADERSHIP

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- Publications Executive — IEEE NUST Student Chapter