TURAB HUSSAIN

SOFTWARE ENGINEER

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PROFESSIONAL SUMMARY

Software Engineering undergraduate at Sir Syed University of Engineering and Technology with hands-on experience across the full stack: Angular, React and SCSS on the frontend; Python, Java, C#, SQL and MongoDB on the backend. Has built six academic projects, from an award-winning Java banking system grounded in object-oriented design patterns to a CNN-based medical image analyzer. SMEC Winner 2024, seeking a software engineering internship or junior role to build secure, scalable products.

TECHNICAL SKILLS

Languages	Python, Java, C#, SQL
Frontend	HTML, CSS, SCSS, Angular, React
Databases	SQL (relational design, indexing), MongoDB
Machine Learning	Convolutional Neural Networks, data preprocessing & augmentation, Jupyter Notebook
Core CS	Object-oriented design, design patterns, data structures & algorithms
Tools & Platforms	Visual Studio, NetBeans, Eclipse, Thonny, Ubuntu (Linux)

PROJECTS

Healthcare Analyzer — *Python, CNN, Deep Learning*

- Built a deep learning application that analyzes medical images to support preliminary detection of health conditions.
- Designed and trained a CNN with stacked convolution, pooling and dense layers to improve classification accuracy on medical imaging datasets.
- Implemented preprocessing and data augmentation pipelines that improved generalization and reduced overfitting on limited healthcare data.

Bank Management System — *Java, OOP, Design Patterns* **Award Winner**

- Developed a secure banking application managing customer profiles, instant deposits and withdrawals, and automated balance checks.
- Applied object-oriented design patterns throughout to keep the codebase modular, secure and easy to maintain.

Hospital Directory — *Data Structures & Algorithms*

- Designed a central directory linking patient records, doctor assignments and appointment scheduling.
- Selected data structures for fast lookup, reducing search and retrieval times across interconnected records.

Item Inventory Management System — *Java*

- Built an inventory system tracking product variants, real-time stock levels and daily sales metrics.
- Added automatic low-stock alerts so shortages are flagged before they happen.

Library Management System — *Python*

- Created a program for book categorization, borrower records and check-out history.
- Built command-line tools that streamline book issue and return workflows.

Chef Library Database — *SQL*

- Modeled a relational schema linking chefs, ingredients and recipes across multiple tables.
- Wrote targeted multi-table queries and optimized indexing for fast lookups.

EDUCATION

Bachelor of Science in Software Engineering 2023 – Present
Sir Syed University of Engineering and Technology, Karachi

Intermediate (Pre-Engineering) 2021 – 2023
Aga Khan Higher Secondary School, Karachi

Matriculation 2009 – 2021
Aga Khan School, Karachi

ACHIEVEMENTS

- **SMEC Winner** — 2024
- **Award Winner, Project Exhibition** — Bank Management System
- **Kangaroo Math Contest Winner** — 2019