

# Hamza Khan Tariq

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## EDUCATION

Quaid-i-Azam University – Bachelor's in Computer Science

Oct 23 – Jun 27

- Key Courses: Programming and Problem-Solving, Object-Oriented Programming, Data Structures and Algorithms, DBMS

## CERTIFICATIONS

The Structured Query Language (SQL) -University of Colorado Boulder

- Learned about the origins and historical basis of SQL.
- Gained expertise in standard SQL usage and syntax.
- Developed skills to code SQL queries for analyzing data stored in relational databases.
- Worked with PostgreSQL for database querying and management.

Introduction To Computer Vision and Image Processing -IBM

- Learnt core concepts of Computer Vision and it's real-world applications.
- Gained experience with OpenCV, including image processing , edge detection and basic contour detection.
- Worked with color space conversions, image transformation , and basic drawing functions to manipulate and analyze visual data effectively

Python for Data Science , AI and Development -IBM

- Covering python fundamentals and its applications in data science and AI.
- Gained experience with pandas , NumPy , Matplotlib for data manipulation , analysis and visualization.
- Developed and ran python code in Jupyter Notebooks.

## PROJECTS

Document Scanner ( Python + OpenCV )

[Repository](#)

- Developed a document scanner using python and OpenCV to detect and extract documents from images.
- Implemented image processing techniques such as grayscale conversion , blurring , edge detection ( canny ) , and contour detection
- Applied perspective warping to obtain a top-down view of the document for clean and readable output.

Laptop Management System(C++ and File handling)

[Repository](#)

- Developed a console-based Laptop Management System in C++ using file handling for persistent data storage.
- Implemented CRUD operations (Create, Read, Update, Delete) with the ability to read and write data from a CSV file.
- Streamlined data management by leveraging CSV file handling for efficient record manipulation and retrieval.

## SKILLS

Programming Languages: C++ , html5 , CSS3 , SQL , Python ( NumPy , OpenCV , Pandas , Matplotlib)

Technologies : MySQL , MS Access , Linux (kali-Linux) , Git

Environments: VS code , VS studio