

HAMZA QURESHI

Software Engineer

Python | C++ | Certified AI Developer | Data Science

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SUMMARY

Experienced software engineer with a strong background in data structures and algorithms. Expertise in software development using programming languages such as Python and C/C++. Quick learner and critical thinker eager to join the team and contribute to the organization's goals. Participation will broaden abilities and expertise. Excited to collaborate with the team and create a significant influence.

SKILLS

Languages: Modern C++ (C++11/14/17/20), C, Python

Frameworks & Tools: QT, MFC, PyQt, Docker, RESTful APIs, SQL

Dev Tools: Pycharm, Jupyter Notebook, Vscode, Visual Studio

Version Control: Git, GitHub

EDUCATION

- 9/2023 - 7/2025 **National University of Computer and Emerging Sciences - Islamabad, Pakistan**
Master's in Data Science
- 9/2016 - 7/2020 **Bahria University - Islamabad, Pakistan**
Bachelor's in Electronics Engineering

EXPERIENCE

- 4/2023 – Current **Secure Tech Cards Private Limited - Software Engineer** Islamabad, Pakistan
- Developed a sophisticated C++ library with cryptographic operations, secure server-client communication, and logging, enhancing data protection for over million users; modernized legacy project with CMake.
 - Developed a desktop application that automated ISO 7816-4 Smart Card personalization data generation; this innovation improved operational efficiency, processing 20,000+ records without manual intervention.
 - Engineered a desktop application for smart card personalization, achieving ISO 7816-4 APDU commands execution standards; implemented comprehensive logging; and increased operational efficiency by 40%.
 - Implemented multi-threaded Python solution for real-time sensor status updates to a central server; simultaneous monitoring of 200 sensors, facilitating immediate response actions for anomalies detected.
 - Created a desktop application using QT Python to prepare Smart Card scripts and personalization data; streamlined script execution process and enhanced data handling capabilities by 35%.
- C++, Python, PyQt6, QT, CMake / G++, MinGW, MSVC
- 8/2021 – 5/2022 **Nextek Service - Software Design Engineer** Islamabad, Pakistan
- Created a multi-threaded desktop application to optimize real-time data processing from FPGA over Ethernet, resulting in a 40% reduction in data latency and enhancing efficiency for critical defense operations.
 - Spearheaded the automation of protocol extraction processes through Python scripting, achieving a remarkable 50% reduction in manual entry time while enhancing overall data accuracy across all the teams.
 - Designed detailed schematics and printed circuit boards (PCBs) for legacy systems, ensuring precise replication of original designs; enabled a seamless transition to modern systems, reducing downtime by 25%.
 - Engineered a robust desktop application for DVR systems with advanced video recording, playback, and feature testing capabilities; modernized legacy project with CMake and reduced build times by 35%.
- C, C++, Python, Verilog / QT, MFC, Xilinx / PCB Design

PROJECTS

- Dicom Segmentation | QT C++ | Image Segmentation** Github
- Pioneered DICOM segmentation project using Visualization Toolkit (VTK) and Insight Toolkit (ITK), enabling precise visualization of medical images; enhanced clinical insights by 40% through advanced 3D conversion and rendering techniques, improving diagnostic accuracy.
- C++ / QT, VTK, ITK / CMake

CERTIFICATIONS

- Artificial Intelligence** Certificate
- Presidential Initiative for Artificial Intelligence & Computing - PIAIC

LANGUAGES

English - B2+, Urdu - Native