# Muhammad Talha

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#### EDUCATION

**Habib University** 

September 2020 - June 2024

B.S. Computer Science

Alpha College

September 2018 - August 2020

A-Levels

EXPERIENCE

**QLU** | Software Developer (Full Stack: TypeScript/Node.js/Next.js/Express)

June 2024 - October 2024

- Implemented a custom search algorithm using Cassandra on an at-rest encrypted database, ensuring security and efficiency.
- Singlehandedly deployed attachment functionality, managing the complete development lifecycle for front-end and back-end integration.
- Collaborated with design and product teams to create user-centric applications adhering to design principles and user flow requirements.

 ${\bf Jacqueline~Construction} \mid {\it Software~Developer~(Typescript/Node/NextJS/Express)}$ 

 $October\ 2024-Current$ 

- Design and develop cutting-edge web application.
- Colloborate with design and product team to create applications that comply with design and user flows
- Use best-practices and industry standard tools such as git, eslint, Kanban, JIRA and Linear.

## Projects

Yohsin Connect | Python, LangChain, FAISS, PyTorch, TensorFlow

2024

- Developed a Retrival Augmented Generation (RAG) chatbot to provide instant responses to inquiries from prospective students at Habib University.
- Integrated advanced LLM models using TensorFlow and PyTorch to understand and generate human-like responses.
- Utilized LangChain for streamlined implementation of chat functionalities and FAISS for efficient information retrieval from a large vector database/store of university related documents.

### Personal Home Lab and Smart Home Setup | YAML, Python, Docker,

Ongoing

- Configured diverse services: Jellyfin, Home Assistant, Transmission Daemon with public access
- Managed Docker containers for efficient deployment

BomberMan Clone | C++, SDL2, SPRITE ANIMATIONS, POLYMORPHISM

December 2021

- Recreated the famous bomberman game in C++ using SDL2 including sprite animations, and custom game mechanics
- Implemented OOP design patterns, polymorphism

#### SKILLS

Languages: C/C++, Python, JavaScript, HTML/CSS, CUDA, SQL LATEX

Tools: Git/GitHub, Bash, Yaml, Docker, FASTAPI