

# Muhammad Amin Yahya

+92 3361434505 | [maminyahya@gmail.com](mailto:maminyahya@gmail.com) | [linkedin.com/in/muhammadaminyahya](https://linkedin.com/in/muhammadaminyahya) | [github.com/MuhammadAminGit](https://github.com/MuhammadAminGit)

## EDUCATION

### Information Technology University

*Bachelor of Science in Computer Science*

*CGPA: 3.93/4.0*

Lahore

*Aug. 2021 – Present*

## EXPERIENCE

### Associate Software Engineer

August 2023 – Present

*Veritus Labs LLC*

- Implemented a Swarm Structure algorithm in C++ to efficiently scan and analyze complex structures, optimizing resource allocation and processing time.
- Developed a robust object detection application that identifies and tracks objects in real-time from drone footage, utilizing the YOLO algorithm integrated with a React.js front-end.
- Designed and developed a comprehensive Map Editor application, enabling users to upload and configure drone missions, as well as simulate their execution within the Gazebo simulation environment.
- Maintained an internal fork of the QGroundControl application, managing and updating a codebase of over 800k loc to cater it to our needs.

### Intern

May 2023 – July 2023

*Veritus Labs LLC*

- Designed and developed the user interface for the Ground Control application using Qt and C++
- Created and implemented an internal task management application using React.js
- Enhanced the user interfaces of various internal applications, improving usability and overall user experience.

### Teaching Assistant

August 2022 – May 2023

*Information Technology University*

- Streamlined the process of code extraction for evaluation and grading, resulting in a more efficient and accurate assessment system.
- Automated the generation and distribution of weekly progress and grade reports for students via email, enhancing communication and transparency.

## PROJECTS

### Spatial Analysis of Traffic Accidents | *Python*

March 2024 – May 2024

- Conducted in-depth spatial and temporal analysis of traffic accidents in New York City, providing valuable insights into accident patterns and trends.
- Identified critical hotspots and contributing factors that significantly impact crash occurrences, leading to targeted safety interventions.
- Utilized Seaborn and Matplotlib to create detailed heatmaps and visualizations, effectively communicating data-driven findings and recommendations.

### ThreeFace WMS | *Vue.js, TypeScript*

Feb. 2023 – May 2023

- Developed a comprehensive full-stack warehouse management web application for vendors, integrating both front-end and back-end functionalities.
- Implemented features to provide complete control over inventory and accounts

### Facial Recognition using PCA | *Python, Numpy*

Nov. 2022 – Dec. 2022

- Engineered a facial recognition model by implementing Principal Component Analysis (PCA) from scratch, achieving a recognition accuracy of 80%.

### Shogi | *C++*

March 2022 – June 2022

- Developed a multiplayer Japanese variant of Chess (Shogi) using object-oriented programming principles

## TECHNICAL SKILLS

**Languages:** JavaScript, Python, C/C++, TypeScript, SQL

**Frameworks/Libraries:** Qt, React.js, Vue.js,

**Developer Tools:** Git, Docker, Linux, Jupyter