

# Zeshan Hussain

Electrical Engineer

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## INTERNET

🌐 [ZeshanHussain](#)

🌐 [zeshanhussain.dev](https://zeshanhussain.dev)

🌐 [zeshanhussain14](#)

## Summary

I'm a C++ software developer & Electrical Engineer. I have > 4 years of commercial software development experience.

## EXPERIENCE

### GuardiansafeAI

Software Engineer & Founder

🌐 <https://guardiansafeai.com/>

August 2022 – Present

Los Angeles

#### Trained and Optimized a Neural Network for Active Threat Detection

- Developed and fine-tuned a convolutional neural network (CNN) using Darknet and OpenCV to detect and classify active threats in real-time video streams.
- Achieved a detection accuracy of 98% on a custom dataset, leveraging transfer learning with pre-trained models like ResNet and YOLO.
- Deployed the model on AWS EC2 instances with GPU acceleration for scalable, low-latency inference.

#### Designed and Implemented a C++ Image Processing Library Using OpenCV

- Engineered a high-performance C++ library to compare and identify differences between images, utilizing OpenCV for edge detection, feature matching, and histogram analysis.

#### Developed Cross-Platform C++ GUI Backend Applications Using FLTK

- Built a cross-platform backend application for Windows and Linux using FLTK (Fast Light Toolkit) to create lightweight and responsive graphical user interfaces.
- Implemented event-driven programming and custom widgets to enhance user interaction and application performance.
- Integrated the backend with RESTful APIs to enable seamless data exchange between the GUI and external services.
- Reduced application load time by 30% through code optimization and efficient memory management techniques.

#### Designed and Deployed a Startup Website Using Modern Web Technologies

- Architected and developed a responsive, mobile-friendly website using HTML5, CSS3, and JavaScript (ES6+), ensuring cross-browser compatibility and accessibility.
- Leveraged Bootstrap for front-end styling and jQuery for dynamic content rendering, resulting in a 20% improvement in user engagement.
- Optimized website performance by minimizing HTTP requests, compressing assets, and implementing lazy loading, achieving a Google PageSpeed score of 100%.

### StudentNest

Computer Science & Math tutor

🌐 <https://www.studentnest.com/student/>

October 2024 - present

Los Angeles

Teaching k-12 Computer science & Math

- C++ Instructor
- Java Instructor
- HTML Instructor

## EDUCATION

### Moorpark College

Electrical Engineering

Present

## Skills

### Neural Networks

yolo (v3 and v4), darknet, darkhelp, darkmark, machine learning (artificial neural networks to assist with computer vision

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### OpenCv

Computer Vision Framework

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CUDA, C++, C, Swift, HTML, CSS, cmake/ctest/cpack, gdb, Visual Studio, NVIM, kiCAD

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