

# Kevin Zhang

Ottawa, Ontario

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## Education & Certification

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### ***Bachelor of Computer Science, Major in Philosophy***

Sep 2019 - Present

Carleton University, Ottawa, ON

- Fourth Year Undergraduate, CGPA 9.22/12.0 (B+)
- Expected Graduation: June 2025

**Relevant Courses:** Abstract Data Types and Algorithms, Introduction to Systems Programming, Introduction to Software Engineering, Introduction to Statistical Modeling, Fundamentals of Web Applications, and Computer Vision

### ***Google IT Support Certificate***

Feb 2025

Coursera & Google

- Completed five courses covering troubleshooting, customer service, networking, operating systems, system administration, and IT security
- Developed foundational IT skills through practice-based assessments
- Verification: [Coursera Certificate](#)

## Employment

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### **Application Developer**

May 2024 - Aug 2024

Inchtone

- Utilized HTML, CSS, and JavaScript to design and implement responsive and user-friendly interfaces for the inventory management web application.
- Created RESTful APIs using Node.js and Express.js to manage data flow between the frontend and backend.
- Implemented session management by utilizing cookies for storing session data, ensuring secure and persistent user sessions.
- Integrated Socket.io for real-time updates and notifications, enhancing the user experience by providing instant feedback on inventory changes.

### **IT ServiceDesk Analyst | IT Technician**

Jan 2023 - May 2023

Stega Networks, Ottawa, Ontario

- Resolved user-reported computer and networking issues and requests through a ticketing system.
- Configured and set up computers and networking devices, installing necessary software and hardware.
- Provided on-site client support, including installing, replacing, and troubleshooting computer systems and network devices.
- Performed networking tasks, such as cabling and creating CAT6 cables to ensure stable ethernet connections.

### **Security Patroller**

Sep 2021 - Sep 2022

National Defence Headquarters (Carling) | Royal Canadian Mounted Police (Leikin)

- Diligently patrolled assigned areas to ensure safety and security.
- Swiftly responded to service calls and emergencies.
- Assisted staff and visitors with directions, inquiries, and access related concerns.
- Documented daily activities and incidents to help keep records organized and assist team communication

## Applied Projects

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### Face Recognition Web Application – [Live Demo](#)

Sep 2024

- Developed a full-stack web application using React for the client-side, with Node.js and Express for server-side logic, handling API requests and responses.
- Integrated the Clarifai API for facial recognition, processing image data and rendering a bounding box around the detected face using image coordinates.
- Implemented secure authentication using bcrypt for password hashing and JWT for session management, with PostgreSQL as the database for storing user profiles and activity data.
- Utilized Knex.js to manage the connection to the PostgreSQL database, handling SQL queries for user registration, login, and tracking image submission entries.

### Distance Calculation and Object Size Estimation in Images

June 2024

- Developed a program in Python using OpenCV to estimate real-world distances and object sizes from static images
- Applied grayscale conversion and Gaussian blurring to reduce noise and improve object detection.
- Implemented the Hough Circle Transform to detect circular objects and Canny edge detection to identify rectangular-like objects, drawing bounding boxes around detected shapes
- Completed Calculated real-world measurements by converting pixel distances using a known reference object on the left-most side of the image

### Simulated AED device

Dec 2023

- Developed a simulated Automated External Defibrillator (AED) device using C++ in Qt Creator, focusing on accurate emulation of its operations.
- Implemented an observer pattern for effective state management, utilizing Qt's signals and slots for responsive event handling.
- Created a user-friendly interface and simulated body that allows users to interact with the AED simulation, providing a more comprehensive and practical experience for users.

### Chat Server with Private Messaging

Nov 2022

- Developed a chat server in JavaScript using node.js and socket.io for real-time communication.
- Implemented private messaging functionality, allowing users to send and receive direct messages to and from specific individuals within the chat server.
- Implemented authentication and authorization using JSON Web Tokens (JWTs) to secure user data and ensure only authorized users can access the chat server.

### Line Obstacle Bot

May 2019

- Worked with Arduino hardware and software to build and program a line bot to complete an obstacle course.
- Created a 3D mockup of the base design to visualize and plan out the design and functionality.
- Programmed the Arduino using C++ to control various components and functions based on surrounding environment data received from the sensors.

## Technical Skills

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**Languages:** Java, Python, JavaScript (ES6+), HTML, CSS, C++, SQL

**Frameworks & Libraries:** Node.js, Express.js, React.js (JSX), Django, jQuery, Knex.js, MongoDB, Socket.io

**Tools and Platforms:** Git, PostgreSQL, qtCreator, RaspberryPi, Arduino IDE, JSON Web Tokens, Postman, Windows, Linux, VirtualBox

**Networking:** Basic networking, cabling, CAT6 cable creation, troubleshooting network devices.