

# Elbert Chao

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## EDUCATION

**University of Western Ontario** Sept. 2021 – May 2025  
Software Engineering (BESc) Dean's Honours List 2021-2025 (**Year 4 GPA: 3.9**) London, ON  
**Coursework:** Intro to Machine Learning, Artificial Intelligence I/II, Data Structures & Algorithms, Cloud Computing, Database Management, Web Technologies, Software Testing & Maintenance

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, Java, SQL, HTML/CSS  
**Frameworks:** React, NextJS, React Native, Flask, Node, Express  
**Tools:** GCP, MongoDB, TensorFlow Lite, Docker, MySQL, Nginx, PM2, Jira, Confluence

## EXPERIENCE

**Free Appropriate Sustainability Technology – FAST** 🔗 Nov. 2024 – Apr. 2025  
*Full Stack Developer (NextJS, Python, Flask, Nginx, PM2)* London, ON

- Developed a full-stack solution with NextJS frontend and Flask backend to deliver ML-based insights into strawberry health, resulting in a **90%** increase in crop monitoring effectiveness
- Enhanced AI model performance by conducting real-world tests, systematically debugging edge cases and refining feature inputs, achieving classification speeds under **500ms**
- Maintained server uptime across a **2-month** period with **fewer than 3** total downtime incidents using Nginx and PM2 for load balancing and process management
- Configured and secured a production environment for a campus-deployed web service, enabling **24/7** availability throughout the term with minimal downtime or configuration drift

## PROJECTS

**FormFixer.AI** 🔗 Sept. 2024 – Apr. 2025  
*Team Lead (React Native, Express, TensorFlow Lite, MongoDB)* London, ON

- Launched a real-time form correction app aimed at novice gym users, preventing injury-causing form breakdowns across **2** common exercises by analyzing joint angles and body posture live
- Optimized a TensorFlow Lite model to improve pose estimation accuracy, reducing joint misclassifications by **80%** — from 1 in 5 frames to **fewer than 1 in 20** during video analysis
- Managed a team of **4** developers and streamlined sprint workflows using Jira and Confluence, reducing average task delivery time by **2-3** days per sprint

**CHEER Program** 🔗 Sept. 2023 – May 2024  
*Team Lead (React, Express, MongoDB, Node)* London, ON

- Built a MERN full-stack social platform for children with special needs, integrating clock-in/out, client, and admin dashboards to support **over 150** user interactions per day across distinct roles
- Implemented serverless architecture with Google Cloud Run, enabling **5x** traffic scalability without pre-provisioning and reducing hosting overhead by paying only during code execution
- Containerized the app with Docker, cutting setup time from 1 hour to **under 10** minutes and eliminating environment-related bugs during development and deployment
- Led sprint planning for a team of 5 using Jira and Confluence, reducing missed deadlines from **4** per sprint to just **1** and ensuring on-time delivery of all major features over **four 2-week** cycles