

# Ziad Elnagar

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## EDUCATION

### Western University

Bachelor of Engineering Software Engineering

London, Ontario

May 2027

- Relevant Coursework: Data Structures & Algorithms, Database Management Systems, Operating Systems, Computer Networks, Web Technologies, Software Engineering Design, Distributed & Networked Systems
- Awards: Scholarship of Distinction; HackWestern Hackathon Winner

## TECHNICAL SKILLS

**Languages:** Python, JavaScript/TypeScript, Java, SQL, C/C++, Bash, HTML, CSS, C#

**Technologies:** React, Node.js, FastAPI, REST APIs, PostgreSQL, AWS, Docker, Kubernetes

**Workflow:** Git, CI/CD, Agile/Scrum, Deployment, Testing, Jira, Jenkins, GitHub Actions, MLOps

## EXPERIENCE

### Software Developer

Feb. 2026 – Present

Toronto, Ontario

- Modernizing customer-facing website using **React/TypeScript** resulting in improved client lead conversion rates

### ML Software Engineer

Oct. 2025 – Dec. 2025

Toronto, Ontario

RJH Biosciences

- Improved clinical data reliability by **59%** by designing **Python**-based data processing pipelines to clean and normalize **5,000+** genetic records, reducing downstream preprocessing time by **71%**
- Reduced model training variance by **41%** by engineering statistically balanced datasets using Python (**pandas**, **scikit-learn** utilities), improving performance stability across repeated evaluation runs
- Designed and optimized a machine learning classification system using **scikit-learn**, achieving **93.3% accuracy with zero false negatives**, prioritizing safety-critical performance constraints
- Created a responsive, polished UI using **HTML/CSS/JavaScript** to display model predictions, adding client-side and server-side input validation and clear results rendering for end users

## PROJECTS

### NutriScan (Winning Hackathon Project) | React/Vite, TypeScript, Node.js/Express, Gemini API

- Developed a full-stack computer-vision web application using React and Gemini API by processing user-uploaded images, resulting in personalized nutrition plans and grocery carts in under **2 minutes** per request
- Converted face/hand scans and user inputs into actionable nutrient targets and supplement recommendations, generating **8+** structured nutrient/vitamin targets per assessment via schema-validated JSON outputs
- Deployed to MLH's DigitalOcean Platform via GitHub CI/CD, managing secrets with environment variables and serving the optimized Vite/React build through a Node/Express runtime

### Resumind | React, TypeScript, Docker, Claude API, Node.js

- Engineered an AI-driven resume analyzer in React/TypeScript, designing an algorithm that boosted job keyword matching accuracy by **33%** for automated resume scoring
- Validated performance across **50+** resume uploads, generating real-time ATS scores and detailed recommendations tailored to each job description, improving ATS alignment by up to **27%**
- Containerized the app with Docker (multi-stage build) using Node 20-alpine, separating dev/prod deps and shipping only build artifacts for a smaller, deployable image

## LEADERSHIP / EXTRACURRICULAR

### Software Developer

Sep. 2023 – May 2025

London, Ontario

Western Formula Racing

- Built and deployed a responsive team website using React and Tailwind on GitHub Pages, improving recruitment visibility and contributing to **21%** membership growth the following season
- Coordinated development across **17+** engineers using GitHub issues and pull requests (reviews, merges, release coordination), shipping sponsor-facing features that resulted in **\$7K+** in renewed sponsorship revenue