

# Ziad Elnagar

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## EDUCATION

**BESc, Software Engineering - Third Year**

University of Western Ontario

May, 2028

London, Ontario

- o **Related Coursework:** Data Structures & Algorithms, Database Management Systems, Agile Principles, Operating Systems, Embedded Systems, Networking & Cloud, Web Technologies, Quantum Computation

## EXPERIENCE

**RJH Biosciences**

Toronto, Ontario

Machine Learning Research Intern

Oct 2025 – Current

- **Developing predictive machine learning models** in Python using pandas and scikit-learn to classify genetic variants as pathogenic or benign, achieving a **15% early accuracy improvement** through advanced **data preprocessing, feature engineering, and model optimization**
- Cleaning and integrating **10,000 +** variant records from public genomic repositories, reducing missing data by **35%** and improving dataset consistency for downstream model training

**Western Formula Racing**

London, Ontario

Software Developer

Sep 2023 – May 2025

- **Led a team of 15 software engineers** to build and maintain the official team website using **React** and **Tailwind CSS**
- Managed version control and collaboration via **GitHub**, ensuring consistent review cycles and clean deploys

## PROJECTS

[NutriScan](#) (Award-Winning Hackathon Project) | React, TypeScript, Tailwind, Gemini API

- Built a **computer vision** powered web app that analyzes **facial features** to detect early health signals and generates **personalized nutrition goals, weekly meal plans, and budget optimized grocery carts**
- Processed real user images to identify **fatigue, pigmentation, and hydration cues**, converting them into **actionable wellness insights** tailored for students

**AI Podcast Clipping SaaS** | Python, FastAPI, WhisperX, LR-ASD, Gemini API, AWS, REST APIs

- Built an **AI-powered SaaS platform** that transcribes full podcasts, detects viral moments with **Gemini 2.5 Pro**, and generates speaker-cropped short-form video clips with subtitles for TikTok and YouTube Shorts
- Served **ML pipelines** using **FastAPI** with serverless GPU inference via **Modal**, managed clip generation and long-running jobs with **Inngest queues**, and stored assets on **AWS S3**

[Resumind](#) | TypeScript, React, Tailwind CSS, Claude API

- **Automated** an AI-powered resume analyzer by integrating **Claude-3.7-sonnet API** with a custom **keyword extraction algorithm** to evaluate resume-job description compatibility
- Conducted testing across **50+ resumes**, improving ATS keyword match scores by up to **35% through personalized, real-time feedback**

[Western Formula Website](#) | React, Tailwind CSS

- Worked with **15+ Developers** to build a fully responsive website showcasing team structure, design goals, and technical achievements, website supported **1,500+ monthly visitors** during the sponsorship season
- Performed manual **testing and debugging** in an **agile workflow**, tracking and managing issues through **Git**

[Personal Portfolio Website](#) | React, Tailwind CSS, Vite

- Developed a **responsive portfolio site** to showcase **personal projects and technical skills**
- Optimized layout and image delivery for mobile and desktop, reducing homepage load time by **25%**

## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript/Typescript, HTML, SQL, C#, C/C++,

**Frameworks & Tools:** Git, Django, React, Docker, AWS, Azure, Linux, MySQL, PostgreSQL, MongoDB