Ziad Elnagar

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EDUCATION

Western University   London, Ontario
Bachelor of Engineering Science in Software Engineering   *Sep. 2023 – May 2027*
- Relevant Coursework: Data Structures & Algorithms, Database Management Systems, Agile Principles, Operating Systems, Embedded Systems, Networking & Cloud, Web Technologies, Quantum Computation
- Awards: Scholarship of Distinction ($**2,500**); Hackathon Winner - two awards totaling $**700+**

TECHNICAL SKILLS

Languages: Python, Java, JavaScript/TypeScript, C/C++, C#, SQL, HTML/CSS
Workflow: Git, Jira, Linux, CI/CD, Agile, Version Control
Technologies: React, Node.js, FastAPI, Django, AWS, Docker, Kubernetes, MySQL, MongoDB, scikit-learn, NumPy

EXPERIENCE

Machine Learning Research Intern   Oct. 2025 – Present
RJH Biosciences   *Toronto, Ontario*
- Cleaned and integrated **1,000+** FLT3 mutation records using Python and pandas, reducing inconsistencies by 35% and improving dataset quality for downstream modeling
- Engineered a balanced clinical dataset using targeted undersampling, curated benign expansion, and controlled oversampling, enabling reliable training for a medically safe classifier
- Created and optimized a **Random Forest model achieving 93.3% accuracy** with 0 false negatives by tuning hyperparameters and applying a **0.1 decision threshold**, ensuring perfect sensitivity for screening

Software Developer   Sep. 2023 – May 2025
Western Formula Racing   *London, Ontario*
- Led a team of **15+** software engineers using GitHub to build and maintain the official team website with React and Tailwind CSS, ensuring clean deploys and consistent review cycles
- Collaborated with subteams to keep technical content, sponsorship information, and driver profiles up to date and aligned with branding during competition season

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 Clipper | *Python, FastAPI, WhisperX, Gemini API, AWS, REST APIs*
- Developed an AI-powered 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 ⌗ ↗ | *React, TypeScript, Tailwind, Gemini API*
- Created 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 ⌗ ↗ | *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%**