Ammar Elzeftawy

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SKILLS

Software:

Languages: Java, C#, C/C++, Python | *Web Development:* JavaScript, TypeScript, PHP, Classic ASP | *Databases:* MySQL, Firebase, MariaDB

Tools/Frameworks: Angular, React, React-Native, Flask, NodeJS, DBeaver, Azure DevOps, Jira, Git, GitKraken, Bash, AWS EC2, MPLab, Arduino.

Technical:

Full-Stack Development, Software Testing, Database Creation & Management, Agile Software Development, Data Structures, Data Analysis, Machine Learning Developer, Robotic Development, Embedded Systems Development.

EDUCATION

Bachelor of Science in Software Engineering, Minor in Mechatronics   Sep. 2020 – April 2025

Schulich School of Engineering, University of Calgary   *Calgary, AB*

- Cumulative GPA 3.57/4.0
- Scholarships & Awards: Entrance, Undergraduate Scholarships(x2), PURE (x3)

WORK EXPERIENCE

Artificial Intelligence Research Intern, University of Calgary   May 2024 – Sep. 2024

Undergraduate Researcher   *Calgary, AB*

- Conducted an extensive literature review evaluating AI's impact on academic practices, student learning outcomes, teaching methods, intellectual development, and developed guidelines for effective AI integration in education.

Junior Software Developer, Ripple Group Inc.   Sep. 2023 – Sep. 2024

Full-Stack Developer   *Calgary, AB*

- Engineered and optimized web/mobile applications using Angular, C#, Classic ASP, and Python, adhering to Agile methodologies for timely project iterations.
- Enhanced reporting functionalities for key clients, demonstrating expertise in data management and UI/UX principles.
- Streamlined database and version control workflows with DBeaver and GitKraken, while promoting clean code practices to elevate team standards.

Machine Learning Research Intern, University of Calgary   May 2023 – Sep. 2023

Undergraduate Researcher   *Calgary, AB*

- Conducted a focused literature review on the ROI of data analytics, emphasizing AI and ML innovations, and outlined areas for further investigation.
- Developed and launched a full-stack web tool for ROI analysis, integrating ML models via AWS EC2, using React, Node.js, and Flask.
- Implemented active learning strategies for ML models, achieving an **80% reduction** in training costs without compromising on the **90% accuracy** benchmark.

Full-Stack Development Research Intern, University of Calgary   May 2022 – Sep. 2022

Undergraduate Researcher   *Calgary, AB*

- Developed a cross-platform mobile navigation app for pedestrians, integrating React-Native, Firebase, and various APIs, including Google Maps and ArcGIS, to enhance urban mobility and safety.
- Worked closely with researchers and experts to design a reusable software architecture and deploy ML models via FastAPI, leveraging scikit-learn for backend logic.

PROJECT EXPERIENCE

CLI Code Collaboration Project, University of Calgary   Jan. 2024 – April 2024

- Engineered a CLI code collaboration tool on a peer-to-peer network, enhancing team agility and code management efficiency.
- Implemented replication and fault tolerance mechanisms for high availability, using BadgerDB and distributed hash tables

for data consistency.
- Facilitated peer discovery and dynamic load distribution, significantly improving system resilience and operational scalability.

Pharmacy Website Database Project, University of Calgary   Sep. 2022 – Dec. 2022
- Developed a full-stack website using XAMPP and PHP for efficient pharmacy management, achieving a **20% boost in productivity**.
- Designed and implemented a comprehensive database management system tailored for prescription and data management.
- Utilized various modeling techniques (ERD, HIPO, DFD, UML, Sequence diagrams) to ensure a well-structured and efficient system.

EXTRA-CURRICULAR

Egyptian Student Association, VP Finance   Nov. 2022 – Present
- Led to several events hitting **1,000+ attendees**, surpassing previous records.
- **Grew revenue by 500%**, directly enhancing the quality of events.
- Strengthened community engagement, resulting in a **120% increase** in online followers and members.

Empire Attire Affiliate Program, Sponsor   March 2019 – Present
- Secured sponsorship for personal gym training by demonstrating unwavering commitment to fitness excellence.
- Promoted to **Level 4 sponsor** of Empire Attire clothing brand, contributing to its success and brand awareness.

CERTIFICATES

Engineering Leadership Program, University of Calgary   Sep. 2020 – April 2023
- Developed leadership skills through workshops and events, mastering team dynamics, emotional intelligence, and project management.
- Acquired valuable insights into leading while collaborating within a team, navigating difficult conversations, and fostering complementary roles.

Research Skills Foundations, Taylor Institute for Teaching and Learning   May 2022 – Sep. 2022
- Acquired foundational research skills through online events and workshops.
- Enhanced understanding of researcher identity and personal skill development using reflective practices.
- Mastered the ability to articulate the significance and impact of research to various on-campus and off-campus communities.

Engineering Entrepreneurship Essentials, University of Calgary   Sep. 2020 – April 2022
- Developed expertise in marketing and customer development, and acquired skills in entrepreneurial project planning and management.
- Fostered a growth mindset inspired by fellow entrepreneurs and their journeys.
- Built and developed key interpersonal skills, including communication, teamwork, coordination, project management, and adaptability.