Amgad Elgamal

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OBJECTIVE

A motivated individual with in-depth knowledge of languages and development tools, seeking an internship in a growth-oriented company where I can contribute to its mission while having the scope to expand my skill set.

EDUCATION

McGill University – Montreal, QC   *August 2022 – April 2026*

Bachelors of Engineering in **Software Engineering Co-op**

Coursework: Data Structure & Algorithms, Intro to Software Systems, Digital Logic, Model-Based Programming.

EXPERIENCE

BeauT   *August 2023 – Present*

Software Engineer Intern   *Montreal, QC*

- Orchestrated a seamless CMS development using the MERN stack with **TypeScript**; achieved a 35% improvement in back-end request handling by optimizing **Node** and **Express.js** configurations.
- Enhanced user interface responsiveness by 50% through judicious use of **React** with **Context API**, **MUI**, and the **TailwindCSS** framework.
- Introduced **TensorFlow** and **OpenCV** integrations, realizing advanced facial recognition capabilities. Alongside, fortified data integrity, achieving a 98% secure transaction rate after integrating the **Stripe API** with **JWT authentication**.
- Reduced front-end code complexity by 30% through efficient use of modular components and utility-first CSS principles, ensuring faster feature deployment and iterative UI/UX improvements.
- Pioneered a streamlined development pipeline, leveraging modular **TypeScript** practices, leading to a 20% acceleration in feature rollouts and collaborative coding.

Ambient Intelligence Lab (AMI-Lab)   *May 2023 – August 2023*

Data Science Intern   *Sherbrooke, QC*

- Advanced a medication deprescription study, processing 300M+ JSON and CSV files using Python's **Pandas**, **NumPy**, and **MATLAB** for vital medication metrics.
- Led data extraction from **ElasticSearch** with Kibana Query Language (**KQL**) and developed a real-time algorithm, efficient for processing upwards of 100M+ data files, to decode fibre-optic sensor bed mat data through **signal processing**.
- Utilized **linear regression** for heart rate analysis and deployed **LSTM models** in **TensorFlow** & **Keras** for physical activity pattern recognition, optimizing hyperparameters.

PROJECTS

***"Cloudnerd"** – ML-based Weather Forecasting Application*   🔗   *June 2022*

- Developed a **React** and **TypeScript** app for weather forecasting via cloud patterns.
- Integrated **TensorFlow** models with 84% accuracy using climatological data.
- Utilized **Firebase** for backend services, ensuring secure, real-time updates.

***"Shazoom"** – Song lyric recognition web app | Hackathon Award Winner*   🔗   *October 2022*

- Developed a speech-recognition UI in **Python** and **Flask** that identifies songs from user vocals.
- Utilized **HTML/CSS** and **JavaScript** for the front-end and integrated multiple APIs to enhance identification accuracy.

Caterpillar Game | *Java, Object Oriented Programming, Data Structures*   *March 2023*

- Developed a simple caterpillar game using OOP principles, featuring movement, collision detection and food consumption, resulting in an interactive gaming experience.
- Implemented diverse Java data structures, including doubly linked lists, stacks, and queues for seamless data management.

SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, HTML/CSS
Other: Machine Learning, Data Analysis, ElasticSearch, Git, Express.js, Node.js, MongoDB, React, TensorFlow, OpenCV, Keras, KQL
Spoken languages: English (Bilingual), French (Professional Working Proficiency), Arabic (Native)

CAMPUS INVOLVEMENT

McGill Egyptian Student Association (ESA) | President   *Jan 2023 – Present*

- Steered the association's strategic vision, fostering Egyptian cultural engagement within the university while adeptly **overseeing 6 executives** to optimize internal communications and sub-committee performance.