

# AMGAD ELGAMAL

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## Objective

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I am an outgoing and motivated software engineering student eager to contribute to a dynamic tech team. Excited to bring innovation and further hone my skills during an internship.

## Education

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**McGill University – Montréal, QC**

**August 2022 – April 2026**

*Bachelors of Engineering in Software Engineering Co-op*

**Coursework:** Data Structure & Algorithms, Software Systems, Model-Based Programming (MDP), Statistical Computing

## Experience

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**BeauT (Tech Startup)**

**August 2023 – Present**

*Software Engineer Intern – Part-time*

*Montréal, QC*

- Developed a CMS using the MERN stack with **TypeScript**; achieved a 35% improvement in backend request handling by optimizing **Node.js** and **Express.js** configurations.
- Enhanced user interface responsiveness by 50% through the usage of **React.js** with **Context API**, **MUI**, and the **TailwindCSS** framework.
- Integrated **TensorFlow** and **OpenCV**, adding advanced facial recognition capabilities. Alongside, improved data security, achieving a 98% secure transaction rate after integrating the **Stripe API** with **JWT authentication**.

**Université de Sherbrooke**

**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 **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

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**Cloudnerd** | *TypeScript, React, TensorFlow, Firebase* [Web App](#)

**June 2022 - July 2022**

- Developed a ML - based **React** and **TypeScript** web 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** | *Python, JavaScript, HTML/CSS, Flask* [Git](#)

**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.

## Technical Skills

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**Programming Languages:** Python, Java, JavaScript, TypeScript, HTML/CSS, R

**Frameworks & Other:** ElasticSearch, KQL, Git, Express.js, Node.js, MongoDB, React.js, TensorFlow, Keras, OpenCV, Firebase, Unix (Software Systems), Bash (Software Systems), Jenkins (MBP), Cucumber (MBP)

**Spoken Languages:** English (Fluent), French (Advanced), Arabic (Fluent)

## Campus Involvement

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**McGill Egyptian Student Association (ESA) — President**

**January 2023 - Present**

- Steered the association's strategic vision, fostering Egyptian cultural engagement within the university. Managed and collaborated closely with 6 executives to ensure seamless communication and optimal performance of sub-committees.
- Spearheaded the "Cultural Night" event, achieving record attendance of over 50 attendees, showcasing Egyptian cuisine and heritage, as well as promoting intercultural understanding on campus.