

Amgad El Gamal

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EDUCATION

McGill University – Montreal, QC
Bachelors in Software Engineering Co-op

August 2022 - Present

SKILLS

Programming Languages: Python, Java, HTML/CSS, JavaScript, VHDL

Miscellaneous: Machine Learning, Data Analysis & Visualization, Software Design, Elasticsearch, Quartus, Git

Spoken Languages: English, French, Arabic

EXPERIENCE

BeauT – Beauty and Tech

August 2023 – Present

Software Developer (Part-Time)

Montreal, QC

- Spearheading the development of a robust CMS using **Django** and **React**, optimizing for 1000+ client interactions and data management.
- Collaborating on AI enhancements for BeauT's platform, leveraging **TensorFlow** and **OpenCV** for Python-based facial recognition and image processing.

Ambient Intelligence Lab (AMI-Lab) | 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 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 | PORTFOLIO

“Cloudnerd” – ML-based Weather Forecasting Application | HEP 2022 

June 2022

- Crafted a **React** and **TypeScript** web app that interprets cloud patterns for weather forecasting.
- Integrated a **TensorFlow** machine learning model trained on extensive climatological data.
- Deployed **Firebase** for backend services, ensuring secure, real-time UI updates.
- Demonstrated strong performance, with an impressive **84% accuracy rate** in weather prediction, underscoring the model's proficiency in analyzing complex meteorological patterns.

“Shazoom” – Song lyric recognition web app | Hackathon Award Winner 

October 2022

- Designed a speech-recognition UI that identifies user-sung songs and retrieves top matches.
- Employed **Python** and **Flask** for backend development, **HTML/CSS** for content structuring, and **JavaScript** for dynamic frontend interactions.
- Integrated several **speech-recognition APIs** to cross-verify lyrical inputs, boosting song identification accuracy.

“Jouan” – Diet-Based Restaurant Locator Chabot | McHacks 

February 2023

- Built an interactive chatbot to identify user dietary preferences and locate nearby suitable restaurants.
- Used **Python** and **Google Maps API** for backend development and restaurant data retrieval.
- Frontend constructed with **JavaScript**, **CSS/HTML** for a user-friendly interface.

LEADERSHIP

President - Egyptian Student Association (ESA) | McGill University

Jan 2023 – Present

- Directed the association's vision, overseeing internal communications, event coordination, and initiatives that promoted Egyptian culture within the university community.
- Managed association governance, ensuring conflict resolution, facilitating member dialogues, and providing leadership to sub-committees for optimal performance.