# EDUCATION

**McGill University – Montreal, QC**  **August 2022 - Present** *Bachelors in Software Engineering Co-op*

# 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**

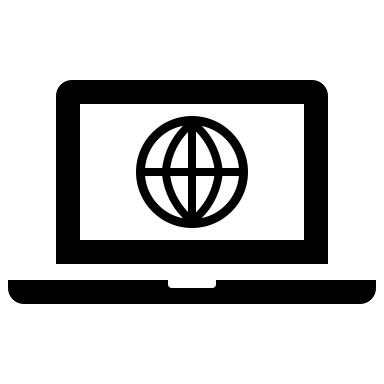
*Software Developer (Part-Time) Montreal, QC*

* 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.

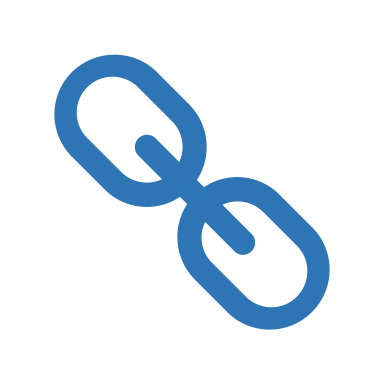
**Ambient Intelligence Lab (AMI-Lab) | Université de Sherbrooke** **May 2023 – August 2023**

*Data Science Intern Sherbrooke, QC*

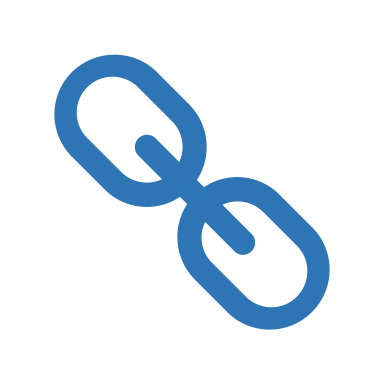
* Advanced a medication deprescription study, processing **300M+** JSON and CSV files using Python's **Pandas, NumPy, and MATLAB** for vital medication metrics.
* Led data extraction from **ElasticSearch** with Kibana Query Language (**KQL**) and developed a real-time algorithm, efficient for processing 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.

**[](https://amgadelgamal.github.io/portfolio/)**

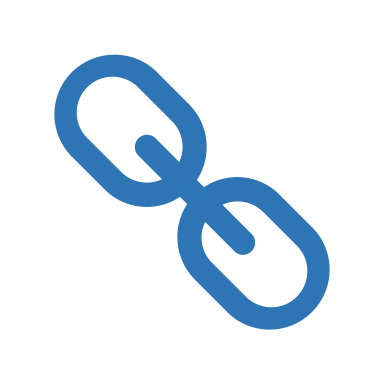
# PROJECTS | [PORTFOLIO](https://amgadelgamal.github.io/portfolio/)

**[](https://welcome-to-cloudnerd.web.app/) *“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.

**[](https://github.com/amgadelgamal/Shazoom)*“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.

**[](https://github.com/amgadelgamal/Jou-an)*“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.