Moetaz Mohamed
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EDUCATION

Concordia University **Montreal, QC**
- Bachelor of Computer Science Co-op**. GPA**: 4.05 **Sept 2020 – December 2024**
- **4x Dean's List** (achieved an annual GPA higher than 3.75)
- **Gerald, Maria, and Georginia Daoussis Scholarship** (reward for academic excellence in the 2020-2021 academic year)

EXPERIENCE

Genetec – Unification Team **Montreal QC**
Full Stack Software Developer Intern **May 2024 – Present**
- Developed a web application involving video surveillance, license plate recognition (LPR), and access card management.
- Utilized Angular NX and NXGS state management for the front-end and C# .NET 8 for the back-end.
- Designed and implemented features specifically for the LPR management page.
- Conducted unit tests and E2E tests to ensure high code quality and functionality.
- Utilized WebSockets for real-time video streaming and event monitoring, ensuring robust live monitoring and management of security events.

Genetec - AutoVu **Montreal QC**
Full Stack Software Developer Intern **Jan 2023 - April 2024**
- Contributed to the development of a micro-services-based cloud platform on Microsoft Azure
- Developed and implemented features on the application's back-end using .NET Core / C# and front-end using Angular.
- Applied service bus messages and Rest APIs for seamless integration and communication among services.
- Ensured high code quality through active participation in code reviews and adherence to strict unit tests and integration tests.
- Contributed to the adoption of a continuous integration and delivery (CI/CD) process using Azure DevOps.

Teaching Assistant – Objected Oriented Programming l **Montreal QC**
Concordia University Montreal, QC **Sept 2024 – Present**
- Lead tutorial sessions for a class of over 50 students, providing support on course material and assignments
- Explain core concepts of object-oriented programming including arrays, 2D arrays, data types, loops, and object-oriented principles like classes.

PROJECTS

NSERC-URSA Student Researcher | Atlas Analytics Lab **Present**
- Developing an innovative approach to enhance tissue segmentation and extraction for cancer diagnosis and detection.
- Using a CLAM-based tissue extraction algorithm combined with the Segment Anything Model (SAM) for precise segmentation.
- Improving the efficiency and accuracy of WSI analysis in comparison to traditional vanilla griding techniques.
- Evaluating the method's potential application in clinical and research settings, aimed at driving advancements in cancer diagnosis.

Defenders of Hogwarts: A Gesture-Controlled Shooter (Third place Winner in ConUHacks Hackathon) GitHub **Jan 2024**
- Developed a Harry Potter-themed game using Unity as part of Beenox challenge in Quebec's largest hackathon.
- Integrated hand gesture recognition via a Python program and linked it to Unity with sockets for real-time interaction.
- Programmed detailed animations and realistic game physics to enhance the magical combat experience.

Robust Image Classification on Noisy CIFAR-10 Dataset GitHub **Sept 2023**
- Developed three Convolutional Neural Network (CNN) models specifically designed to mitigate label noise in the CIFAR-10 dataset.
- Conducted comprehensive experiments with label noise at various levels (30%, 50%, 80%, and 90%) to assess model performance.
- Implemented Kaiming and Xavier initialization techniques to enhance network performance and stability.
- Utilized advanced loss functions like Symmetric and Reverse Cross Entropy for effective training in high noise conditions.
- Integrated Active Passive Loss (APL) to combine robust loss functions, achieving enhanced accuracies on all noise levels.

Escape Grid: The Parking GitHub **Sept 2022**
- Developed a puzzle game focused on navigating a car out of a congested parking lot with the minimum number of moves.
- Utilized pathfinding algorithms like A*, Depth-First Search, and Uniform Cost Search for optimal car exit strategies.
- Achieved a remarkable 20% reduction in algorithm computation time, significantly enhancing game efficiency and user experience.

SKILLS

Languages: English (Fluent), Arabic (Fluent)
Programming: JavaScript, Typescript, Python, Java, MySQL, PostgreSQL, C#, C++, PHP, HTML, CSS
Frameworks & Libraries: Angular, React, NodeJs, NestJs, Matplotlib, NumPy, PyTorch, TensorFlow, ASP.NET, Apache Spark, Dask