

Chaimaa Khal

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Education

POLYTECHNIQUE MONTRÉAL

BS IN SOFTWARE ENGINEERING

- 3.9/4.0 GPA
- Excellence list

Links

🐙 GitHub cka-y

in LinkedIn chaimaa-khal

📁 Portfolio [WIP] cka-y.github.io/portfolio

Coursework

GRADUATE

Web Development

Software Quality

Algorithmic and Data Structure

Data Science

Big Data

Statistical Theory and Methods

Artificial Intelligence

Reinforcement Learning

Machine Learning

Computer Vision

Swarm Intelligence

Metaheuristics

Video Game

Skills

PROGRAMMING

Python • R • C/C++ • HTML/CSS • JavaScript • SQL
• TypeScript • Java •

MISCELLANEOUS

Shell • \LaTeX • Jenkins/Teamcity • Microsoft Office •
AWS • Git

Honors

EXCELLENCE SCHOLARSHIP

POLYTECHNIQUE DE MONTREAL

Awarded to students who have great academic records upon acceptance to an engineering program.

Experience

SOFTWARE DEVELOPER

MORGAN STANLEY

📅 2021 – 2023 (Today)

📍 Montreal, CA

- Delivered significant improvements to the codebase.
- Collaborated closely with UI developers to successfully introduce new features.
- Designed and developed automation solutions to optimize productivity.
- Acted as release manager, overseeing the timely and accurate deployment of software releases.
- Developed internal tools using Python Flask and Angular TS, enhancing team efficiency and effectiveness.

Keywords: Java, C++, Python, Perl, Finance, SQL, Unit Testing, MQ, Unix, Backend Development, Agile, Jira, Jenkins, BitBucket

AUGMENTED REALITY INTERN

BOMBARDIER

📅 2021

📍 Montreal, CA

- Collaborated on researching the integration of augmented reality technology into Bombardier's product offerings.
- Developed multiple software applications utilizing augmented reality for aircraft design, utilizing the HoloLens 2, Microsoft MRTK, and Unreal Engine 4.26 (C++).
- Thoroughly documented software production processes to ensure seamless integration and efficient maintenance.
- Organized future hardware requirements for scaling augmented reality development and integration efforts.

Keywords: Augmented Reality, C++, Unreal Engine, Research

Projects

COLLABORATIVE DRAWING APPLICATION

MULTIPLATFORM UI & BACKEND

Created and designed a Chrome supported web version, desktop version and android version of a real time collaborative drawing application that communicates with a NodeJS server.

AI / ALGORITHM PROJECTS | ACADEMIC AND PERSONAL PROJECTS

- Designed and developed an AI agent that utilizes Monte Carlo Tree Search and a greedy algorithm to proficiently play the game Quoridor (Python, 2022).
- Implemented the Particle Swarm Optimization (PSO) algorithm to optimize scheduling in the job-shop environment with multi-purpose machines, increasing efficiency and reducing costs (Python, 2022).
- Developed a heuristic algorithm in C++ to effectively address the complex problem of gerrymandering (C++, 2020).
- Created a stock market sentiment analysis tool using natural language processing techniques on Reddit posts, providing actionable insights to inform investment decisions (Python, 2021).