Mathys Loiselle

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TECHNICAL SKILLS

Programming │Python • JavaScript • Java • C • C++ • C# • TypeScript • Clojure • Erlang

AI/ML │ NumPy • TensorFlow • Keras • OpenCV • Dlib

Web & Cloud │ Angular • React • Azure • Firebase • REST APIs • HTML/CSS • Bootstrap

Tools │ VSCode • Git • JetBrains Products • Jupyter Notebook • Google Colab

Languages │ English (Native) • French (Native)

EDUCATION

Bachelor of Science – Computer Science   **2022 - 2026 (Expected)**
Concordia University - Montreal, QC
- Dean's List: Fall 2023 – Fall 2024
- Relevant Courses: Data Structures & Algorithms (A+), Theoretical CS (A+), Computer Graphics (A)

Minor in Mathematics and Statistics   **2022 - 2026 (Expected)**
Concordia University - Montreal, QC
- Relevant Courses: Linear Algebra (A), Multivariable Calculus (A+), Probability & Statistics (A)

High School Diploma   **2018 - 2022**
Mission Vista High School - Oceanside, CA, USA
- 3.84 GPA

EXPERIENCE

AI Software Developer - Internship   **Sep 2024 – Dec 2024 (4 months)**
TaylorMade Golf – Carlsbad, California, USA
- Implemented complete voice features for TaylorMade chatbot (Angular/C#/Azure)
- Developed automatic color adjustment algorithm (Python/React)
- Built Mahalanobis model for order processing anomaly detection (Python)
- Research in CV, ML, and prompt engineering for POC development

Computer Vision Engineer   **Oct 2023 - Jan 2024 (4 months)**
Nano Stride - Montreal, QC
- Implemented real-time robotics head motion control algorithms
- Built computer vision pipeline using OpenCV/Dlib
- Collaborated with cross-functional engineering team

Dataset Annotator   **Nov 2023 (1 month)**
Concordia Applied AI Institute - Montreal, QC
- Dataset annotation for ML model training/testing
- Collaborative team input for data optimization

PROJECTS

Reinforcement Learning Rocket League Agent   **Nov 2024 – Present (2 months)**
- Developed PPO-based reinforcement learning agent
- Implemented curriculum learning and reward shaping
- Created database tracking and learning progress visualization system

IEEE Smart and Radio-Controlled Marshmallow Cannon   **Jun 2024 – Aug 2024 (3 months)**
IEEE Concordia - Montreal, QC
- Developed facial recognition and tracking for marshmallow turret
- Implement Haar Cascade as an efficient facial detection model
- Implement KCF tracker as lightweight tracking framework
- Collaborate with multidisciplinary engineering team

Cody AI Service Robot   **Oct 2023 - Dec 2024 (3 months)**
Nano Stride - Montreal, QC
- Developed real-time facial recognition and tracking for moving robot head
- Paired TDOA system with speech analysis and lip synching to identify target speaker
- Researched statistical and machine learning techniques
- Collaborated with multidisciplinary engineering team

Personal Portfolio Website   **August 2024 (1 month)**
- Used React and Tailwind CSS to implement a responsive layout and modern UI
- Support for English and French languages

AWARDS & ACTIVITIES

Coding Competition   **Sep 2023**
SCS - Montreal, QC
- Received 6th place in the competition
- Coded various problems as quickly as possible over the course of 2 hours

Member   **Sep 2022 – Present (2+ years)**
- *Google Developer Student Club (GDSC)*
- *Software and Computer Science Society (SCS)*
- *Concordia Ski & Snowboard Club (CSSC)*

INTERESTS

Travelling Abroad	• France	• UK
	• Italy	• Vietnam
	• Spain	• Costa Rica

Sports	• Ice Hockey	• Table Tennis
	• Snowboarding	• Badminton
	• Biking	• Rock Climbing

Passions	• Computer Science: Machine Learning, Deep Learning
	• Mathematics & Statistics
	• Physics: Quantum Physics and Astrophysics