THOMAS TRENTY

Master's Student in Computer Science

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EDUCATION

Master of Computer Science at ENSEIRB-MATMECA School of Engineering 09/2022 - 10/2025

French Preparatory classes at CPGE Lycée Michel de Montaigne 09/2020 - 07/2022

High-School Diploma (with highest honor) at Lycée Sud Médoc - La Boétie 09/2017 - 07/2020

PROJECTS

Game Of The Amazons & AI player ENSEIRB MATMECA

- Led the development of the program architecture and of a unique AI player that placed top 2 out of 30 competing teams.
- Inspired by the literature, we implemented an optimised minimax algorithm with features such as alpha-beta pruning and depth-first search making our player highly competitive.

C - gdb - Valgrind - Minimax algorithm - gcov - gprof - Presentation Skills

Advanced ML and AI Projects ENSEIRB MATMECA

- Worked on various AI projects, including reproducing Cycle-GAN Deep Convolutional Networks, performing text sentiment analysis on Twitter messages using Machine Learning SVM, comparing the accuracies and inference times of classical models on given datasets, and more.

Python - Machine Learning - AI - Deep Learning

User Space Thread Library ENSEIRB MATMECA

- Headed a team of 4 in the development of a C library with advanced features such as mutexes and user space signals. Achieved the highest performance among all student groups and professors' implementations. Implemented n-to-m multiplexing of user threads on kernel threads to leverage multiprocessing.

C - gdb - Valgrind - Computer Architecture

Visualgo: An Algorithms Teaching Website ENSEIRB MATMECA

- Coordinated the organization of a team of 7 students over 4 months to develop a fully functional website using cutting-edge WebAssembly technologies. Our project was selected for presentation at the ENSEIRB-MATMECA partners' evening.

Project Management - Python - Software Development - GitHub Actions - Customer Relationships

EXPERIENCE

Reseach Intern at University of Toronto 05/2024 - 08/2024

- Worked on Quantum Machine Learning at a Pulse level. This new field of study takes advantage of Parameterized Quantum Circuits to build quantum ML models. It combines the unique capabilities of both classical and quantum hardware in the current Noisy Intermediate-Scale Quantum era.

Study Coordinator at TransPerfect 07/2022 - 08/2022

- Managed a voice recording studio for sample collection to enhance our clients' voice recognition AI solutions. I actively participated in online training sessions to maintain quality standards, resulting in an excellent 98% client acceptance rate for the recordings.

SKILLS AND INTERESTS

Languages: Python, C/C++, Java, Typescript, Bash, SQL, PHP, HTML/CSS/JS.
Technologies: Git, Linux, Jupyter Notebook, PyTorch, Pennylane, Flask, PostgreSQL, Node.js.
Areas of Expertise: Data Science - Machine Learning/AI - Algorithms and Data Types - Computer Architecture - Software Development - Quantum Computing - Computer Networking - Management.