Jonathan Lamontagne-Kratz

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kratzj.vercel.app

Education

McGill University — Montreal, QC
May 2027
Bachelor of Science, Honours Computer Science. GPA 3.75
Scored in top 1% of first year students at McGill
Relevant Coursework: Intro to Software Systems, Intro to Computer Science, Intro to Computer Systems, Linear Algebra and Geometry, Calculus 1 and 2, Discrete Structures

Bangkok, Thailand
May 2023
International School of Bangkok
Graduated with high honours. IB Score 42/45
Second highest score at my highschool
7 in HL Computer Science, 7 in HL Physics, 7 in HL History
President of the Chess Club, 4x Vex National Champion and 2x Vex Worlds Competitor

Technical Skills

Programming: C, VexCode (C++), C# for Unity, Java OOP, JavaScript, Python
Web Design: React.js, Next.js, Tailwind CSS, Sanity Studio. Designed: kratzj.vercel.app prtnr.vercel.app and food.ezrahuang.com
Artificial Intelligence: TensorFlow for Deep Learning and Reinforcement Learning. Completed Google Udacity Certification. Created Connect 4 RL agent.
Game Design: Unity and GameMaker
Operating Systems: MacOS, Linux, and Windows

Experience

MCGILL AUV ROBOTICS TEAM — Montreal, Quebec
Software Team Member — August 2023 – Present
- Engineered the software system for the McGill AUV. Designed joystick controls for AUV and upgraded PID system using Python and Rospy.
- Collaborated with over 20+ members of the software team.

ISB VEX ROBOTICS TEAM
Software Lead
- Researched and implemented several software systems and strategies
- Designed and engineered software for the ISB Robots. Programmed fully functioning PID and Odometry systems for accurate robot control.
- Organised team meetings, collaborated with engineers, and conducted testing for 33 hours every week.

Bangkok, Thailand
August 2019 – M
- Conducted quality control checks.
- Coached other robotics teams on how to implement PID and odometry.
- Earned 1st place in nationals 3 years in a row qualifying for the Vex World Championships and achieved Top 100 worldwide for skills during the season

Leadership & Activities

STEM CAMP
Camp Coordinator

Ottawa, Ontario
June 2023 – August 2023

- Coordinated and led a team of counsellors
- Organised and taught daily activities and lessons for children aged 4-13 years old
- Spoke with parents and improved on feedback
- Attended and participated in meetings and training for team leadership

Research Experience

AI Paper Recreation

Montreal, QC

- Recreated Several reinforcement learning papers for advancements like Q-Learning and Deep Q-Learning, experience replay and alpha-beta pruning

Extended Essay

Bangkok, Thailand
August 2022 – March 2023

- Project: A Study of Major Advancements in AI.
- Evaluated the importance and impact of major advancements in the field of AI and identified they're reasons for success

Skills & Interests

Language: English Native, French Intermediate
Interests: Chess, AI, Rock Climbing, Music, Philosophy, Movies