Faculty of Mathematics
University of Waterloo

Dear Department of Pure Mathematics members,

I am writing to express my interest in the Undergraduate Research Assistantship with the Pure Mathematics faculty. My deep fascination with theoretical mathematics and its foundational principles has driven me to seek a role where I can further explore this field through rigorous research.

My academic background and interests align closely with the demands of this position. I have engaged extensively with advanced courses that emphasize proof techniques and skills that are vital for success in pure mathematics research. I am eager to delve deeper into through direct research experiences.

Furthermore, my ongoing studies in Computer Science complement my mathematical training, providing me with a unique analytical framework that enhances my approach to complex mathematical problems. This combination ensures a well-rounded perspective that I can bring to your department, contributing effectively to both collaborative and independent projects.

Thank you for considering my application. I am looking forward to the possibility of contributing to the esteemed Pure Mathematics faculty and am excited about the learning opportunities that lie ahead.

Sincerely,

Eason Li

Eason Li

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EDUCATION

University of Waterloo   Waterloo, ON
Honours Computer Science, Co-operative Program   *Aug. 2023 – May 2028*

Related Courses

Math 145, 147, 146, 148, 245, 247, 249, Pmath 347, CO 255

EXPERIENCE

Volunteer   Jul. 2022 - May. 2023
Friendship Inn   *Saskatoon, SK*
- Dedicated time to volunteer in providing food and support for homeless individuals.
- Actively participated in food service, involving preparation, distribution, and cleanup.
- Collaborated with a team of volunteers to efficiently coordinate food-related activities.

PROJECTS

Flappy Bird Game | *Python, PyGame*   May. 2023 - Jun. 2023
- Utilized class to create and manage pipes generated in the game.
- Used PyGame to run the game smoothly.

Chess Game | *JavaScript, p5.js*   Nov. 2023 - Dec. 2023
- Implemented Object-Oriented Programming using classes for a modular chess game structure.
- Utilized arrow functions to enhance code conciseness and readability.
- Designed an intuitive and visually appealing user interface for an enhanced user experience.

Maze Generator | *JavaScript, p5.js*   Oct. 2023 - Jan. 2024
- Implemented an algorithm that randomly generates a maze using classes and arrays.
- Effectively used arrays for recursive maze generation and checking wall status during object movement.
- Utilized class methods for creating and managing each cell in the maze.

CC3K | *C++*   Jul. 2024 - Aug. 2024
- Implemented game features in C++ involving dynamic character interactions, randomized game elements, and ASCII graphical display, enhancing my proficiency in object-oriented programming.
- Utilized design patterns to address specific game development challenges such as character generation and behavior management.

AWARDS

Euclid Math Contest: 2022 - Group V
CSMC Math Contest: 2022 - Group IV
Fermat Math Contest: 2022 - Group V
Hypatia Math Contest: 2022 - Group V
COMC: 2021 - Saskatchewan Bronze Award
International Student Entrance Scholarship - $10,000 (University of Waterloo)
President's Scholarship of Distinction - $2,000 (University of Waterloo)

TECHNICAL SKILLS

Languages: Python, C, JavaScript, HTML/CSS, SQL, Racket
Frameworks: P5.js, TailwindCSS
Developer Tools: Google Cloud Platform, VS Code, PyCharm
Libraries: pandas, NumPy, SciPy, Matplotlib, JAX, PyTorch, Scikit-Learn, SymPy