

# Zachary Fan

Math 2A (20929301)

A meticulous and analytical person with excellent self-study and cooperation skills. Possessing solid foundation in programming.



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Waterloo, Canada



github.com/Lycoris7e4

## SKILLS

C++/C/C# Programming

Unix/Linux based systems

Self-study

Leadership

Communication

Creativity and Design

Pressure Handling

Analytical Skills

## LANGUAGES

English

*Professional Working Proficiency*

Chinese

*Native or Bilingual Proficiency*

## INTERESTS

Video Montage using Premiere

Multimedia PowerPoint Design

Game Design/Development

Badminton

Rubik's cube

## EDUCATION

### Candidate for Bachelor of Mathematics, Honours Degree University of Waterloo

*Courses*

- Objected-Oriented Software Development
- Elementary Algorithm Design & Data Abstraction

## PROJECTS

### Stoicheia

#### Unity 2D Game Development

04/2022 - Present

*Details*

- A long-term team-work project, which is to design and complete a 2D AVG Platform Game that has most of basic functions (e.g. Camera Effects, Light rendering) and extra optimizations for smoother control of the player.
- Related Skills: **Unity, Visual Studio, C# Programming, Object-Oriented Design, Git, Bash**
- Unity Related Skills: **Blend tree, Animation Frame events, Tilemap, UI system**
- Repo link: <https://github.com/LuluZhu5/Stoicheia>, including our **proposal** and **log**

## EXPERIENCE

### Robotic Systems Architectures and Programming (08/2020)

- Project built on a 2-week Robot Summer Camp that builds a complete robot control system using Python and tests with a simple robot built with lego.
- Complete a robot with basic ground movement and three attack modes, controlled by a custom handle or computer

### First Violin in Shanghai Student Symphony Orchestra (07/2018 - 06/2021)

- Communicate with local musicians in English while attending some international music festivals abroad.
- Cooperate with others as a group to perform some small concert.
- Do voluntary performances for and with autistic individuals.

### Museum's docent at Shanghai Entomological Museum (07/2020 - 07/2021)

- Introduce exhibits to visitors and respond to questions including detail explanation, directing and recommandation.
- Train other trainees and volunteers in one-to-many mode.

## ACHIEVEMENTS

### President's Scholarship of Distinction

*Admission average of 95% or higher*

### ARML National Top 20%

*National Top 20% in the ARML Local Mathematics Competition*

### COMC: Gold (National Ranking)

*National Top 25% in Canadian Open Mathematics Challenge*

### USACO: Silver Division

*The second of four levels in USA Computer Olympiad*

### AP Scholar with Honor Award

*Attaining an average score of 5 on all AP Exams taken*