

Alireza Mohaghegh Dolatabadi

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EDUCATION

University of Waterloo

Honours Computer Science; **GPA: 4.00/4.00**

Waterloo, Ontario

September 2023 – June 2027

SKILLS

Languages: C/C++, Java, Python, SQL, Racket, Haskell, R, .NET, HTML, CSS, JavaScript, TypeScript

Technologies & Frameworks: Node.js, Git, Pandas, Flask, Fast API, Django, REST API, MongoDB, SQLite

PROJECTS

UW Course Planner | [GitHub](#)

- Developed frontend and backend infrastructure of a course schedule planning webapp using **Django** and **Next.js**
- Utilized **MongoDB** and **SQLite** frameworks, yielding optimal performance through seamless data management

Code Editor Inspired by Vim | [GitHub](#)

- Designed and developed an editor inspired by Vim using the **C** programming language and the **Ncurses** library
- Implemented **+10** features of Vim including 3 modes, keyboard shortcuts, terminal integration, and indentation

Game Inspired by Stronghold | [GitHub](#)

- Produced a game inspired by Stronghold using **Java** and the **JavaFx** library while applying **OOP** best practices
- Designed and implemented a server-client system for online gaming and a messaging system for communication
- Developed the graphics of the game for offline and online gameplay using the original game's assets and **JavaFx**

Employment Data Analysis | [GitHub](#)

- Analysed employment data from all provinces within **Jupyter Notebooks** using **Pandas** and **NumPy** libraries
- Developed visualizations through charts and performed comprehensive data analysis utilizing 3 **Python** libraries

Avamouz - An Educational Website | [GitHub](#)

- Designed and developed the back-end infrastructure for a music education site using **Django** and **REST API**
- Implemented an **Authentication System**, an educational **Video Hosting System**, and a **Karaoke Platform**

EXPERIENCE

ISAW (A University of Waterloo Student Club)

Undergraduate Vice President

Waterloo, Ontario

December 2023 – Present

- Overseeing finances and event coordination of weekly and major events with **+500** anticipated participants
- Organizing weekly club meetings, coordinating agendas to ensure effective communication among members

Top Olympiad High Schools

Mathematics and Computer Science Instructor

Remote

July 2022 – July 2023

- Instructed 40 talented students for participating in **National & International Mathematics Olympiad**
- Taught 25 students for **Olympiad in Informatics**, with a focus on **Combinatorics** and **Graph Theory**
- Focused on fostering and refining students' **problem-solving** skills through theoretical Olympiad problems

Combinatorics Olympiad (ICO)

Contest Organizer

Remote

April 2022 – June 2022

- Designed problems for the Combinatorics Olympiad (ICO) with **+5000** participants from around the world
- Assessed the difficulty level of the problems and created the answer sheets for the competition's challenges

AWARDS & ACHIEVEMENTS

Silver Medalist - National Mathematics Olympiad: Ranked **13th** out of 10000 participants to compete for the National team membership for the International Mathematics Olympiad (IMO). (September 2021)

Ranked 56th - National Entrance Exam: Competed in the exceedingly competitive **National Entrance Exam** and achieved the rank of **56th out of 145,000** participants from all over the country. (September 2022)

Silver Medalist - Combinatorics Olympiad (ICO): Competed in the **Combinatorics Olympiad (ICO)** with participants from all around the world and was able to achieve a **silver medal**. (June 2022)