

# Francis Madarang

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## EDUCATION

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### University of Waterloo

Waterloo, ON

*Bachelor of Computer Science*

*Expected Sept. 2023 – Apr. 2027*

- Current Coursework: Functional Programming, Algorithms and Abstraction, Algebra

### University of Toronto

Toronto, ON

*Bachelor of Science in Computer Science (Specialist), GPA: 4.0*

*Sept. 2022 – Aug. 2023*

- Reuben Wells Leonard Scholarship Recipient, Dean's List Scholar
- A+ in Linear Algebra, Calculus (Proofs), Multivariable Calculus (Proofs), Foundations of CS I & II
- Led study groups for Computer Science and Math courses

### St. Augustine Catholic High School

Markham, ON

*OSSD, STEM+ Diploma, Information Technology Specialist (SHSM), GPA: 98%*

*Sept. 2018 – June 2022*

- Led FTC Robotics Team to qualify for the provincial championships
- Represented school at University of Waterloo's Canadian Team Math Contest - Earned 3rd Place

## PROJECTS

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### Todo App | *React.js, Django, SQLite, Cookies & Security*

Aug. 2023 – Sept. 2023

- Created a REST API to interact with database containing user login and task data.
- Implemented a secure session system to avoid compromising private user data.

### DeepPoker: CSC111 Project | *Python, pygame, AI, Simulations*

Feb. 2023 – Apr. 2023

- Developed an AI that makes optimal poker moves based on the current game state of a game of poker
- Implemented poker and a poker simulator to obtain training data for the AI
- Implemented different playstyles of poker so the AI could learn from a wide range of playstyles
- Created a GUI for users to play against a trained version of the AI

### Scrap Fighter | *Java, SocketIO, Swing*

Dec. 2021 – Jan. 2022

- Implemented a networked street fighter game with a physics engine and hitbox detection
- Created a GUI for users to practice their mechanics, change their settings and choose their fighters
- Implemented a desync system to ensure the host does not have a competitive advantage over client

## EXPERIENCE

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### Coding Instructor

July 2022 – Sept. 2022

*Code Ninjas Richmond Hill*

*Markham, ON*

- Taught classes of up to 20 children aged 5-14 how to program in Python, Java, Lua and Scratch
- Architected curricula based on the varying skill levels, learning preferences and learning speeds of students

## AWARDS

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### Math and Science Awards

- University of Waterloo 2022 Canadian Team Math Contest - 3rd Place
- University of Waterloo 2022 Euclid Math Contest - Top 8%
- University of Waterloo 2022 Chem13 News Contest - Elemental Tile Achiever
- Highest Achiever Awards: Gr. 10-12 Computer Science, Gr. 12 Physics

### Assorted Awards

- DECA Provincial Representative
- Toastmaster Speechcraft Contest - 2nd Place

## TECHNICAL SKILLS

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**Languages:** Java, Python, C++, SQLite, JavaScript, HTML/CSS

**Frameworks:** Django, Node.js, React.js, Swing

**Developer Tools:** Git, Amazon Web Services, UNIX, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse

**Libraries:** pandas, NumPy, plotly, Apache