

# Frank van Paassen

As a software engineering student, I am an enthusiastic and dedicated individual with a keen interest in computer vision. Beyond my dedication to academics, I also prioritize a healthy and active lifestyle through cycling, hiking and soccer.

## Contact

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[Personal Website](#)

## EDUCATION

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### McMaster University

Bachelor of Applied Science (Computer Science)

September 2023 - Present

- Relevant courses: Linear Algebra, Calculus, Introduction to Computational Thinking
- Club(s): McMaster Catholic Chaplaincy

### Kingsville District High School

September 2019 - July 2023

- 98% average in grade 12
- Awards: Top average in: Computer Science, Computer Engineering, Calculus, Chemistry, Physics and French.
- Achievements: Top 25% in Canadian Computing Competition. Top 33% in Euclid. 5th place in Windsor Secondary School Programming Competition
- Math club, Karate (100+ volunteer hours), Jack Miner Bird Sanctuary event helper

## EXPERIENCE

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### *Software Development Engineer Co-op*

Ecoation Innovative Solutions, Ruthven Ontario

June 2022 - September 2023 (4 months)

- Integrated TensorRT optimizations into a custom computer vision model, achieving a 300% increase in inference speed while maintaining accuracy
- Developed a system for greenhouse rail systems which calculates and displays greenhouse rail tilt in a heatmap based UI, aiding supervisors in swiftly identifying and mitigating safety hazards
- Designed a health check system for robotic components, enabling real-time malfunction alerts.
- Created a responsive user-friendly UI that allows users to easily filter and view robot-captured images.
- Tools used: Python, C++, SQLite, Google Cloud Buckets, Firestore, Docker, Bash

## Projects

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### Math Solver

- Developed and implemented a robust math solver application capable of accurately recognizing and solving mathematical equations from user-provided images
- Designed and implemented a custom parser that effectively interprets the extracted mathematical symbols, and converted them to a suitable format for solving
- Tools used: Python, React, TypeScript, Computer Vision, HTML/CSS

### Automated reCaptcha

- Created a Chrome extension that monitors the user's webpages for reCaptcha elements
- Created a solver that manipulates audio files and Google's Speech Recognition to grant the user a solution token
- Tools used: Google Speech API, Python, Javascript