

# SUNNY LAN

SOFTWARE ENGINEER

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[github.com/sunny-lan](https://github.com/sunny-lan)



[sunnylan.tk](https://sunnylan.tk)



## WORK EXPERIENCE

### Web developer (co-op)

September 2017 - February 2018

Principle Inc. - Richmond Hill, ON

- Built part of admin interface, written in XSLT, PHP, and SQL
- Automated product testing for GuestDeck (ticket selling platform) with web scraping skills
- Designed mobile and web UI (including mockups) for task tracking app

### CCC / Java Tutor

March - June 2019

Triway Education - Richmond Hill, ON

- Taught Java and CCC prep classes in private and group formats
- Prepared and kept lessons organized across 5 classes of varying proficiency levels

### Languages:

Java, C/C++, C#, Javascript, HTML/CSS, Typescript, Python, PHP, SQL

### Frameworks/Technologies:

Unity (C#), OpenCV, Node.js, React & Redux, React Native, Git

### Technical skills:

Algorithms/Optimization & Data structures (contest programming), Database design, Web scraping

## PROJECTS

### E-Wall

September - December 2019

Python, OpenCV, Pygame

- A set of games where characters can interact with reality (such as standing on your hand)
- Webcam feed is processed by applying OpenCV's Sobel edge detection and FLANN matching. The physics engine went through several iterations before being able to handle live data
- Optimized game by multithreading image processing and offloading physics work to native code, increasing frame rate by a factor of 3
- Designed character with animations for simple platformer included in E-Wall

### Code Geese

March - June 2019

Unity3D (C#), Oculus API

- A VR puzzle game where the player controls Geese to do their bidding
- Built in a team of 3, where I worked on Goose control system and interface, puzzle logic system, and designed a level

## AWARDS

### CCO Silver Medallist (May 2019) and CCO Bronze Medallist (May 2018)

- Ranked Top 15 in Canada

### PicoCTF 2nd place in Canada (November 2018)

- Cybersecurity competition, with challenges involving topics like web exploitation and reverse engineering

## EDUCATION

### Candidate for Bachelor of Software Engineering, University of Waterloo (2019 - present)

- Finished previous term with an average of 94% (GPA 4.0)