

# Dilpreet S. Chana

<http://dschana.github.io/> • Github: DSchana  
dschana6@gmail.com | 226.345.0227

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## EDUCATION

**UNIVERSITY OF WINDSOR** | HONOURS COMPUTER SCIENCE WITH SOFTWARE ENGINEERING AND CO-OP  
Sept. 2016 - Present | Expected 2020 | Windsor ON.

## EXPERIENCE

**CITY OF WINDSOR** | LIFEGUARD / INSTRUCTOR  
June 2016 - Present | Windsor ON

**FIRST ROBOTICS** | SOFTWARE ENGINEERING LEADER & MENTOR  
Sept. 2013 – June 2016 | Honourable Vincent Massey S.S.

- Created an OpenCV program to track and lock onto a target in real-time.
- Taught a new team of 10 developers how to program with C++, Java and OpenCV.
- Won the Windsor regional competition and competed at the international level.

**WEST OF WINDSOR INC.** | OFFICE ASSISTANT / MOBILE DEVELOPER  
Summer 2014 | Windsor ON

- Developed an iOS app to allow users quick access to the company resources.
- Assisted in office administration in various departments and general on-site IT support.

## TECHNICAL SKILLS & INTERESTS

**PROGRAMMING LANGUAGES** Python • C++ • Java • C# • Objective-C • Bash • Swift • C

**COMPUTER SCIENCE** Computer Vision • Artificial Intelligence • Robotics • Graph Theory  
Dynamic Programming • Microprocessors • Algorithmic Problem Solving • Optimization

**MATHEMATICS** Matrix Theory • Projective Geometry • Control Theory • Game Theory • Discrete Math

## PROJECTS

**ARTEMIS GAME ENGINE** | [HTTPS://GITHUB.COM/ARTEMISENGINE/ARTEMIS-ENGINE](https://github.com/ArtemisEngine/Artemis-Engine)

- Artemis is a modern cross-platform 2D game engine designed on top of Monogame/Xna.
- The engine implemented unique flow control objects that allowed users to create a multi-page application with great efficiency.

**FRC STRONGHOLD TARGET FINDER** | [HTTPS://GITHUB.COM/DSCHANA/FRC-TARGET-FINDER](https://github.com/dschana/frc-target-finder)

- Find and track the target in a high speed game of FIRST Robotics.
- Used real-time image processing to isolate a target pattern in a scene.
- Optimized the algorithm to operate at around 50 frames per second.

## HONOURS & AWARDS

2013	Top 25%	Fryer Math Contest
2014	Top 25%	Galois Math Contest
2015	Top 25%	Hypatia Math Contest
2015	Winner	FIRST Robotics Regional Competition
2015	Finalist	FIRST Robotics Worlds Competition
2015	Top 25%	Canadian Computing Competition
2016	Honours	High School Graduation
2016	Ontario Scholar	High School Graduation