

# ZORAVUR SINGH

Student, Coder, Hacker. Let's work on something awesome.

✉ [zoravur-singh@uwaterloo.ca](mailto:zoravur-singh@uwaterloo.ca)

🌐 <https://zoravur-singh.netlify.com/>

in </in/zoravur-singh>

🔗 [github.com/zorvvy](https://github.com/zorvvy)

## PROJECTS

### Gravity.js

A physics engine in the browser

📅 Jun 2018 – Nov 2018

- Developed a highly accurate real-time gravity simulation, designed to encourage exploration and deeper understanding of orbital mechanics.
- Implemented features such as numerous numerical integration methods, path tracking, and control of constants through intuitive UI.
- Used multithreading through Web Workers and HTML5 Canvas to achieve optimal performance.

### Stream-transduce

Functional programming with Node.js streams

📅 Dec 2018

- Created and published a library designed to produce and consume Node streams in a functional paradigm.
- Ensured interoperability with other functional programming libraries, such as Ramda, by implementing the transducer protocol.
- Used best practices in documentation and semantic versioning to ensure usability.

### Racket-with-JS

A Racket interpreter written in Javascript

📅 Dec 2018

- Created an interpreter for the programming language Racket (a dialect of Scheme).
- Featured a sophisticated Read-Eval-Print-Loop built on top of Node.js, designed for debugging and experimentation.
- Built core components of a parser such as the lexical and syntactic analyzer, as well as carefully managed internal state and scope of the Racket virtual machine.

### Serv

A collaborative reporting app for Toronto police

📅 Jun 2018

📍 HackTPS

- Built a full-stack web application that facilitated the sharing of evidence related to crime with the police (designed for the Toronto Police).
- Used the computer vision library OpenCV to recognize faces in large video datasets.
- Used web APIs and frontend libraries to create an aesthetic and functional UI.
- Submitted at the hackathon HackTPS.

## EDUCATION

### Bachelor of Computer Science

University of Waterloo

📅 2018 - 2023 (expected)

## TECHNICAL SKILLS

**Languages** Javascript, HTML/CSS, C++, Lisp, Python

**Tooling** React, Webpack, npm

**Cloud Platforms** Firebase, Heroku

**Sysadmin & DevOps** Git, Bash, npm,

## AREAS OF EXPERTISE



### Functional Programming

Experience with the functional paradigm through languages such as Lisp, Haskell, and Javascript.



### ES2017

Proficient with both modern Javascript as well as the extensive Javascript ecosystem.



### Unix/Linux

2+ years of experience using Linux for development on my personal device.

## ACHIEVEMENTS

### President's Scholarship of Distinction

University of Waterloo

📅 May 2018

📍 Waterloo, ON

- This scholarship is given to students with a high school average of over 95%.

### Top 25% - Canadian Computing Competition

CEMC

📅 Jan 2018

📍 Waterloo, ON

- The CCC is a competitive programming competition. In addition to my participation in the CCC, I also solve challenges on online judges such as DMOJ and Leetcode.

### Award of Excellence – DECA Internationals

Deca Inc.

📅 Apr 2017

📍 Anaheim, CA

- DECA is a business competition where students pitch their solutions to business case studies. Competed in Marketing Communications category at the international level.