

# Christopher Gregorian

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## Skills

GO, PYTHON, JAVASCRIPT, HTML/CSS, LUA, C++, JAVA  
GIT, LINUX, BASH, SQL/NOSQL, CHEF, SPLUNK, KAFKA

## Education

**University of Waterloo**  
SYSTEMS DESIGN ENGINEERING

## Experience

### Shopify

January 2017–April 2017

SOFTWARE DEVELOPER—TRAFFIC TEAM

Ottawa, ON

- Developed an automated **DDoS mitigation** method to intelligently identify and block malicious traffic on NGINX load balancers, detecting and **eliminating over 99% of requests** in production.
- Classified traffic patterns in real-time by creating a highly concurrent system in **Go** to process **millions of requests per minute** from a **Kafka** cluster.

## Projects

### Pyshop 🐍

FULL-FEATURED RASTER IMAGE EDITOR

- Built an interactive image editor in **Python**, prioritizing ease of use, technical capability, and performance.
- Implemented a suite of advanced features such as layers, filters, transparency, gradients, and flood fill.

### Life.JS 🐍

REAL-TIME MULTIPLAYER CELLULAR AUTOMATA

- Implemented Conway's Game of Life in the browser using **WebSockets** and **Javascript**.
- Optimized cell evolution algorithms to minimize bidirectional latency to <30ms and maintain game integrity between instances.

### Raveforms 🐍

MICROPHONE AUDIO VISUALIZER

- Extracted raw samples from a low-level audio interface with **C++** and converted them to a usable datatype.
- Applied **Fourier Transforms** to analyze sound samples from data and display frequency and amplification information through a waveform visual.

## Activities

### MasseyHacks 🐍

December 2015–May 2016

HEAD ORGANIZER

Windsor, ON

- Collaborated with a team of 14 students over 6 months to organize **Canada's first MLH-sponsored high school hackathon**, to help students across Ontario and Michigan develop a passion for programming.
- Emceed and managed the activities and opening and closing ceremonies for **over 200 attendees**.

## Awards

**First Place**, Waterloo Engineering Programming Competition

**Second Place**, Ontario Engineering Programming Competition

**Four-time Top Individual Speaker**, Richard Peddie Debate Competition

**\$12 000 National Scholarship Recipient**, University of Waterloo