

# David Song

## CONTACT

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## EDUCATION

### UNIVERSITY OF WATERLOO

#### BACHELOR OF MATHEMATICS

Expected May 2018 | Waterloo, ON  
Honors Computer Science

## CONCEPTS

### COMPUTER SCIENCE

Algorithms  
Objected Oriented Programming  
Design Patterns  
Compiler Design  
Data Structures

### MATHEMATICS

Linear Optimization  
Graph Theory  
Linear Algebra

## AWARDS/HONORS

### CANADIAN COMPUTING CONTEST

2013 | Waterloo, ON  
Top 50 worldwide in algorithm-intensive competition

### TOPS PROGRAM

2013 | Toronto, ON  
Graduated from specialized high school program

## PROJECTS

### FULL STACK DEVELOPER CONNEXTOR PROJECT

December 2014—August 2015 | Waterloo, ON | ConNextor.co

Web platform as a bridge between students and real-world projects

- Dockerized Rails application and created **deployment pipeline** to AWS
- Adapted to fitting **design patterns** and **best practices**
- Took time to **refactor** codebase to ensure efficient design and concise code
- Redesigned frontend pages to ensure **responsive design**
- Carefully planned and discussed on both business and technical sides

AWS

Docker

Rails

Postgres

Git

Bootstrap

### RESEARCHER CREA BIONAVIST PROJECT

September 2014—Present | Waterloo, ON | GitHub

Ongoing research on building a dynamic knowledge graph from text

- Extract relations from sentence trees processed by **Stanford NLP library**
- Filter mined data through a **machine learning** algorithm
- Manipulate the resultant graph with a **clustering algorithm**
- Made an interactive frontend to be made useful for other research groups

NLP

Spark

Scala

D3

NodeJS

### HACKER ICE SLIDERS GAME

Hack the North 2015 | Waterloo, ON | GitHub | IceGame.co

- Completely redesigned and implemented a multiplayer model for a traditional puzzle game
- Resolved **synchronization** issues for accurate multiplayer gaming
- Finished demoable project in 36 hours with **short, concise code**
- Extracted parts and packaged for reuse (after)

SocketIO

HTML5/Canvas

NodeJS

C

## EXPERIENCE

### WEB DEVELOPER TITAN TECHNOLOGIES INC

May 2014—August 2014 | Toronto, ON | Shipmatica

Small team that worked on Shipmatica, a consumer product shipping proxy

- Integrated Endicia into core application pipeline through **APIs**, and deployed after full testing cycles
- **Took initiative** to act on opportunity and worked out a revised cost model
- Built a fully-functional prototyping tool within the browser in 3 weeks
- Leader in accurate logging and descriptive documentation within project

HTML5/Canvas

JavaScript

Postgres

Ant

Java