

# Henrique Salvadori Coelho

Great problem solving skills, detail-oriented, well-organized and willing to take on new challenges. Fluent in English and Portuguese.  
Focused in high volume data processing and toolchain development

## WORK EXPERIENCE

### Software Developer (GroupBy Inc.)

Feb 2018 - Present. Toronto/ON

- Developed a service for Google Cloud Dataflow for data processing
- Assisted with redesigning and migrating a system from ElasticSearch to Google BigQuery
- Deploying and monitoring microservices in a Kubernetes cluster
- Working with a test driven, agile environment
- Building stateless, stream-based, highly scalable data processing systems to handle thousands of events per second
- Working with cloud technologies such as Google Dataflow, Google Cloud PubSub, Kubernetes, Google Cloud Storage, Google BigQuery, and Docker, as well as technologies such as Node.js, Java, ElasticSearch, and TypeScript
- Identifying and mitigating performance issues

### Software Developer (Self-employed)

Apr 2017 - Dec 2017. Toronto/ON

- Implemented a Node.js web portal based on the MVC (Model-View-Controller) pattern with Koa, load balanced with PM2, with PostgreSQL as database
- Developing a portal aiding the workflow for the real estate industry

### ENGINEERING.com Project - Developer at Seneca College's Centre for Development of Open Technology (CDOT)

Sep 2016 - Apr 2017. Toronto/ON

- Created the Open-Source project Rutilus (<https://gmrutilus.github.io/>), which records and analyzes user behaviour, tracking the activity of millions of readers and finding patterns in their usage for determining their preferences
- Deployed on Amazon Web Services using EC2 Instances with Docker

### Z3 Project - Developer at Seneca College's Centre for Development of Open Technology (CDOT)

May 2016 - Sep 2016. Toronto/ON

- Implemented a Node.js server with Express and PM2 as load balancer
- Designed and implemented parts of the CRUD API for the application
- Implemented a secure user management system with Passport.js
- Implemented server and client-side layout rendering with React.js

### Private tutor

January 2015 - Jan 2017. Toronto/ON

- Teach and assist students with C, C++, JavaScript, Java, and PHP

### Grower at Geremia Greenhouse

May 2012 - Dec 2012. Wallingford Center/CT/USA

- Managed approximately 5,000m<sup>2</sup> of ornamental plants greenhouses
- Conceived a method of irrigation to improve and reduce losses of crops
- Created a new, more efficient method for cutting nets for supporting plants

## PERSONAL DETAILS

Location

Downtown Toronto/ON

Phone

(647) 782-5460

Email

henriquesc@gmail.com

Personal website

<https://hcoelho.com>

Blog

<https://hcoelho.com/blog>

LinkedIn

<https://ca.linkedin.com/in/henriquesc>

GitHub

<https://github.com/hscasn>

## LANGUAGES and SKILLS

Fluent in

. C . JavaScript

. Node.js

. Asynchronous programming

. Data structures and algorithms

Competent in

. C++ . CSS/HTML

. Git . Java

. Koa/Express.js . MongoDB

. MySQL . PHP

. PostgreSQL . React.js

. Redux/Flux . Shell Script

. TypeScript

. CRUD/REST HTTP APIs

. Datawarehousing

. Parallel Programming

. Portability and optimization

Some knowledge of

. ASP.net . C#

. Cobol . ElasticSearch

. Go . jQuery

. Linux Kernel . OpenGL

# Henrique Salvadori Coelho

## Intern at Sakata Seed Sudamerica

Jan 2012 - Feb 2012. Bragança Paulista/SP/Brazil

- Developed a better, easier to use spreadsheet for analyzing experiments

## EDUCATION

### Computer Programming and Analysis - Seneca College

2015 - 2018. Toronto/ON. GPA: 4.0/4.0

### Bachelor's in Agricultural Engineering - Centre-West State University

2008 - 2014. Guarapuava/PR/Brazil. Average grade: 8.2/10.0

## COURSES

### Scalable Microservices with Kubernetes

2018. Udacity.com.

### Advanced Linux: The Linux Kernel

2017. Lynda.com. Duration: 2.75 hours

### Build a Modern Computer from First Principles: From Nand to Tetris Part II

2017. Coursera.org. Grade: 96.8%

### Using Regular Expressions

2017. Lynda.com. Duration: 5.5 hours

### Build a Modern Computer from First Principles: From Nand to Tetris

2016. Coursera.org. Grade: 100%

### Web Application Development with JavaScript and MongoDB

2016. Coursera.org. Grade: 100%

### Algorithmic Toolbox

2016. Coursera.org. Grade: 83.1 %

### Machine Learning Foundations: A Case Study Approach

2016. Coursera.org. Grade: 95.5%

### Algorithms, Part I

2016. Coursera.org. Not graded, offered by Princeton University

### Capstone: Analyzing (Social) Network Data

2016. Coursera.org. Grade: 98.9%

### Programming for the Internet of Things Capstone

2016. Coursera.org. Grade: 100.0%

### Interfacing with The Raspberry Pi

2016. Coursera.org Grade: 100.0%

### Up and Running with COBOL

2016. Lynda.com. Duration: 3.5 hours

### Data structures: Measuring and Optimizing Performance

2015. Coursera.org. Grade: 97.7%

. Rust . RPG  
. Amazon Web Services  
. Assembly (x86-64 and Aarch64)  
. Google Cloud Services

## OTHER SKILLS

Tools

JetBrains IDEs, Microsoft Office, UML, Visual Studio, Visual Studio Code, VIM

Operating Systems

MacOS/OSX, UNIX/Linux, Windows

## PERSONAL PROJECTS

Please visit my github\* and my blog\*\* for more details about things I did and learned.

\* <https://github.com/hscasn>

\*\* <http://hcoelho.com/blog>

Notable projects:

### Rutilus

Node.js (JavaScript) + MongoDB

An open-source application that allows you to record and analyze user activity, as well as profiling users based on their behaviour and generate recommendations for content.

<https://gmutilus.github.io/>

Pet projects:

### simpleOS (in development)

C and X86-64 Assembly

A very basic Operating System kernel built in C and x86-64 Assembly

### qdLang (in development)

x86-64 Assembly and TypeScript

A very simple programming language that compiles to x86-64 assembly, with a compiler built in TypeScript

# Henrique Salvadori Coelho

## **The Raspberry Pi Platform and Python for the Raspberry Pi**

2015. Coursera.org. Grade: 98.8%

## **Interfacing with The Arduino**

2015. Coursera.org. Grade: 100%

## **The Arduino Platform and C Programming**

2015. Coursera.org. Grade: 100%

## **Introduction to the Internet of Things and Embedded Systems**

2015. Coursera.org. Grade: 100%

## **Up and Running with Node.js**

2015. Lynda.com. Duration: 1 hour

## **Up and Running with Git and GitHub**

2015. Lynda.com. Duration: 1.3 hours

## **iOS App Development with Swift Essential Training**

2015. Lynda.com. Duration: 6 hours

## **Swift Essential Training**

2015. Lynda.com. Duration: 3.5 hours

## **iOS Game Development with Sprite Kit**

2015. Lynda.com. Duration: 3.5 hours

## **HONOURS**

### **Certificate of Recognition**

Seneca College

April 2017

Certificate of recognition from Seneca Applied Research & Innovation for contributing as a Research Assistant on applied research projects.

### **President's Honour List**

Seneca College

Winter 2015, Fall 2015, Summer 2015, Winter 2016, Summer 2017, Fall 2017

Achieved a GPA of 4.0.

### **Promoted from assistant to grower**

Geremia Greenhouse

August 2012

## **OTHER INTERESTS**

Cooking, music, virtual reality games, 3D printers, tea, puzzles, philosophy, psychology, movies, playing guitar and bass.