

# Mike Belanger

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## Highlights

- I'm a full-stack Web Developer (Python, Ruby on Rails and Angular) with experience in Data Analytics (Apache Spark) and GIS (Leaflet.js, QGIS).
- I also have a background in Cognitive Science and Computer Animation.

Proficient	Familiar
<ul style="list-style-type: none"><li>• Nim.</li><li>• Javascript, Typescript(Angular.js, Angular), Node.js.</li><li>• Python (Pandas, Numpy).</li><li>• Ruby (Ruby on Rails).</li><li>• Git.</li><li>• Docker.</li><li>• GCP.</li><li>• TachyonsCSS.</li><li>• MacOSX, Ubuntu Linux.</li></ul>	<ul style="list-style-type: none"><li>• SQL (PostgreSQL, SQLite).</li><li>• JQuery, VueJS.</li><li>• GIS (Leaflet.js, QGIS).</li><li>• Scala (Apache Spark).</li><li>• Clojure, Racket (Lisp-style).</li><li>• Maven, Java.</li><li>• Attention Models, AI.</li><li>• CSS, Bootstrap.</li><li>• Coffeescript, Clojurescript.</li><li>• Attention Models, AI.</li><li>• Inkscape, Blender, Krita, Gimp.</li></ul>

## Work Experience

### **Junior Developer**

*Weather Telematics Inc. – July 2017 to November 2017, and October 2018 – March 2020*

#### **Python, Scala, Apache Spark, Javascript, Material Design, Typescript, Angular, GIS (Leaflet.js, QGIS).**

- Analyzed weather and traffic data using Apache Spark, a big data processing and advanced analytic engine using both Python and Scala scripts which allow drivers to receive real time notifications if a specific set of conditions were met.
- Used QGIS to segment specific Autobahn routes into GPS points that were all 200 meters apart. These points ultimately determined where exactly road weather conditions would be modelled. This modelling was done for Daimler AG.
- Implemented additional functionality to Weather Telematics' web portal, a Single Web Page Application (SPA) built using Angular that showcased weather predictions and road conditions on a map using the Leaflet.js mapping library.

### **Junior Developer**

*Fluent Solutions Inc. – November 2017 – October 2018*

#### **Ruby on Rails, Tyepscrip, Angular.js, Coffeescript.**

- Developed and improved websites running Ruby on Rails, Bootstrap, Material Design, and Angular.js. Implemented business logic that met the required usage cases using a

TDD approach.

- Wrote front-end code with Javascript, Typescript and occasionally Coffeescript.
- Designed UI mockup work using Inkscape and Pixelmator.

### **Workshop Facilitator**

*theSpace, Ottawa ON - June 2017 – March 2020*

- Taught Graphics Design Workshops using Blender, Krita, Goxel and MagicaVoxel as well as other open-source tools.
- Conceived learning material and adapted my workshops for young adults diagnosed with mental disabilities.

### **Marketing Researcher**

*CPA Plus, Ottawa ON - June 2016 – June 2017*

- Researched for prospective clients for CPA's bookkeeping business. These clients were small businesses that specialized in paving, food services, masonry, and landscaping.
- Wrote advertisements and promotional video scripts.
- Authored promotional scripts, prospective client research using Google Docs.

### **Filing Administrator**

*MD Financial, Ottawa ON - August 2014 – September 2015*

- Proposed, and authored a Python-based scripting system for the automation document sorting.
- Used Python to check for inconsistencies within existing filing systems.

## **Education**

### **Bachelor of Cognitive Science**

*Carleton University, Ottawa, ON, 2010 – 2014*

- Co-authored a peer-reviewed journal publication.
- Implemented an attentional model (Emergic Network Architecture) for an AI system using Python.
- Established a revision control process of the AI model in Git.
- Documented various wiki articles regarding the AI model.

### **Ontario College Advanced Diploma - Animation**

*Algonquin College, Ottawa, ON, 2004-2007*

- Worked with Autodesk Maya, Adobe Photoshop, and Apple Final Cut Pro.
- Developed an understanding of polygonal modelling with Blender.

## **Certificates**

### **The Nature of Code**

*Kadenze, May 2016 - July 2016*

- Learned p5.js, a Javascript data visualization and multimedia library, and how it can be used to simulate various natural processes.

- Gained an understanding of vector mathematics and how it's applied to moving objects and forces.
- Became familiar with creature navigating strategies, such as the Boid behavioural model.
- Got introduced to genetic concepts and their application in creating creature variation, selection and heredity.
- Looked at fractals, and how to implement them using recursion.

### ***Systematic Program Design***

*EdX, June 2015 - July 2015*

- Learned software design using a hands-on approach.
- Used functional programming in the Racket (a Lisp) programming environment.
- Learned about test driven software development and to properly document code.

### ***An Introduction to Interactive Programming in Python***

*Coursera, June 2015 - July 2015*

- Improved my Python coding skills.
- Got exposure to the Codeskulptor environment.

### ***Introduction to HTML5***

*EdX, June 2015 - July 2015*

- Learned about W3C standards, and latest features of CSS3 and HTML5.

## **Volunteering**

### ***Wiki Software Contributor***

*The Blender Foundation, [wiki.blender.org](http://wiki.blender.org) - 2008 - 2012*

- Edited and categorized 3D software documentation.
- Documented latest features of Blender software program, a 3D graphics application.

### ***Free Geek Vancouver***

*Free Geek, Vancouver, 2008-2009*

- Disassembled old computer parts for recycling. Helped sort other parts to be used in new computer systems.