Mike Belanger

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Fullstack Developer

I'm a full-stack developer with 6 years of experience. I've used Ruby on Rails and React for most of my professional web development. I've used some Python and Scala during my data-processing at Weather Telematics. Lately, I've become interested in making local-first and collaborative software.

WORK EXPERIENCE

Independent Contractor   Apr 2024 - Present
Full Stack Developer • Contractor   Ottawa, Canada

Self-employed contractor, primarily working with a defense contractor in Ottawa.

- Obtained "Secret" security clearance.
- Works on **React** based frontends which also uses **Openlayers.**
- Modified **Node.js**-based backend to interface with various **microservices.**

IMRSV Data Labs   Dec 2020 - Aug 2023
Software Developer   Ottawa, Ontario, Canada

- Obtained Canadian security clearance.
- Created **React**-based web interfaces for various classified **defense** projects, and many **proof-of-concepts.** These were done in a high-paced environment with little supervision or guidance. Much of this work was in creating geospatial visualizations using **Leaflet** and **OpenLayers.**
- Scoped out the implementation of various geospatial related pages.
- Added to existing interfaces for a **React Native** mobile application. This application helped retail workers manage customers.
- Worked with server-side technologies in both **Python** and **Node**.
- **Communicated** with various **stake-holders** about new technologies and requirements, such as external sub-contractors and service-providers.

Weather Telematics Inc.   Jul 2017 - Nov 2017
Junior Developer   Ottawa, Canada Area

- Analyzed weather and traffic data using **Apache Spark**, a big data processing and analytic engine using both **Python** and **Scala** scripts which would 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 road weather conditions would be modelled. This modelling was done for Daimler AG for a **proof of concept**.
- Implemented additional functionality for Weather Telematics' web portal. The portal was a **Single Page Application** (SPA) built using **Angular** which showcased weather predictions and road conditions on a map using the **Leaflet** display library.

Fluent Solutions Inc.   Nov 2017 - Oct 2018
Junior Developer   Ottawa, Canada Area

- Worked **directly with customers** to solve their specific requirements.
- Took ownership of entire **Ruby on Rails** projects.
- Defined **project scope** for newer, significant customer requirements and additions.
- 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.
- Used **server-side rendered** HTML for most pages.

- Debugged ActionCable (Ruby on Rails' **Websocket**) API.
- Wrote front-end code with Javascript, **Typescript** and occasionally Coffeescript.
- Designed UI mockup work using Inkscape and Pixelmator.

theSpace Ottawa
Workshop Facilitator

May 2017 - Mar 2020
Ottawa, Canada Area

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

CPA Plus
Marketing Researcher

Jun 2016 - May 2017
Ottawa, Canada Area

- Researches potential company clients.
- Wrote advertisements and video scripts.
- Authored promotional scripts and prospective client research using Google Docs.

MD Physician Services
Filing Administrator (Term position)

Aug 2014 - Sep 2015
Ottawa, Canada Area

- Ensured invoices, payroll information and other important documents were filed and/or scanned.
- Proposed, and authored a Python-based scripting system for the automation of document sorting.

Children at Risk
Peer Buddy

Jul 2012 - Aug 2014
Ottawa, Canada Area

- Work with older, autistic children/teenagers at Children at Risks' various camps.

Canadian Mental Health Association
Summer Staff

May 2011 - Aug 2011

- Worked alongside members of the CMHA's ACTT (Assertive Community Treatment Team)'s division on providing mental health services to clients. Researched strategic planning initiatives for the organization as well.

EDUCATION

Bachelor of Cognitive Science in Cognitive Science

Carleton University • GPA: 2.7

Ottawa • Jan 2010 - Jan 2014

- Co-authored a peer-reviewed journal publication.
- Implemented an attentional model (Emergic Network Architecture) for an AI system using Python, which simulated **eye-tracking** movements.
- Established a revision control system (**git**) for the AI model's codebase.
- Documented various wiki articles regarding the AI model.

Diploma in Animation, Interactive Technology, Video Graphics and Special Effects

Algonquin College of Applied Arts and Technology

Jan 2004 - Jan 2007

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

CERTIFICATIONS

The Bits and Bytes of Computer Networking

Oct 2021 - Present

Coursera

An Introduction to Interactive Programming in Python (Part 1)

Jul 2015 - Present

Coursera Course Certificates

edX Verified Certificate for Systematic Program Design - Part 1   Jul 2015 - Present
edX
Level A CPR   Jun 2011 - Jun 2014
Nonviolent Crisis Intervention   Jul 2012 - Jul 2013
edX Verified Certificate for HTML5 Introduction
edX

VOLUNTEERING & LEADERSHIP

Artengine   Jul 2012 - Present
Workshop instructor

Conducted workshops focused on Blender 3d.

PUBLICATIONS

WikiSilo: A Self-organizing, Crowd Sourcing System for Interdisciplinary Science   Jan 2014
Proceedings of the 36th Annual Conference of the Cognitive Science Society (CogSci 2014)

SKILLS

Backend: Docker, Node.js, Podman, Ruby on Rails

Frontend: Angular, Bootstrap, JavaScript, MaterialUI, OpenLayers, React, Responsive Web Design, TypeScript, Webcomponents

Other: Agile Software Development, Blender, Git, Local-first, Puppeteer, Rust, Webassembly