JONATHAN VANDAMME

SOFTWARE ENGINEER

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North Vancouver

Experience in Full-Stack web development, embedded systems engineering, research and project management. Dedicated, enthusiastic team player commited to efficiently resolving project issues and willing to take ownership of core components.

WORK EXPERIENCE

Full-Stack Web Developer Consultant, CGI   Oct. 2017 - Jun. 2019

Angular Developer and Analyst for Hydro-Québec
Development of a UI component library in Angular2.
- Designed and documented easy-to-use and intuitive APIs for each UI component.
- Validated the component interfaces with the client.
- Supported the team during the development and testing with **Angular6** and **Jest**.
- Integrated the component library into the client codebase.

Full-Stack TypeScript/Angular Developer for the World Anti-Doping Agency
- Architected and scaffolded a scalable, internationalized **Angular6** application.
- Helped scaffold the REST API using **NodeJS, Express and TypeScript**.
- Wrote REST API tests using **JavaScript, Mocha and Chai**.
- Took the initiative to develop a **JavaScript library** that automated the generation of SQL to setup our tests.
- Participated in the Backend and Frontend deployment on production servers.

Electrical/Software Engineer, Sherbrooke University   Jan. 2015 - Apr. 2017

The Inolivent Laboratory develops a medical device to induce ultra-fast therapeutic hypothermia using total liquid ventilation.
- Designed a distributed, safety-critical control system in C++.
- Designed a touch user interface in C++/OpenGL using the IMGUI pattern.
- Designed custom printed circuit boards with redundant ARM microcontrollers.
- Documented the processes according to the medical standards (IEC 62304).
- Developed algorithms to monitor the elasticity of the lungs in real-time.
- Participated in the creation of the **Orixha medical startup**.
- Coinventor for a pending **International Patent Family Application**.

INTERNSHIPS

Software Developer, Sherbrooke University   Sept. - Dec. 2010 & May - Aug. 2011
Developed a data-driven touch interface to control a medical ventilator using C#.

Software Developer, CAE Inc   May - Aug. 2009 & Jan. - Apr 2010
Flight simulator and tools development using C++ and Python for the military and cockpit development departments.

PERSONAL PROJECTS   https://github.com/jo-va

Evolving Creatures - Haskell application   2019
Artifical world simulation using neural networks, genetic algorithms and functional programming techniques.

GoTurtle - React-Native/Firebase mobile application for Relay For Life   2018
A mobile application that tracks the distance covered by groups of participants during outdoors events, available on **Google PlayStore**.

Hop - A global illumination rendering engine written in C++ and scripted in Lua   2017
An interactive multithreaded and vectorized (SIMD) Monte-Carlo path-tracer for photorealistic image rendering on the CPU.

YAK - A multiprocessor 64-bit kernel written in Assembly and C   2015
A small operating system with a high resolution terminal that boots from a USB stick.

TECHNOLOGIES

Frontend
- JavaScript, TypeScript
- Angular2+
- React, React-Native
- NGRX, Redux, RxJS
- HTML, CSS, SCSS

Backend
- NodeJS, Express
- Firebase
- Java, C/C++
- Haskell, Python
- REST & GraphQL APIs
- MySQL
- MongoDB, RethinkDB

Package Managers / Bundlers
- NPN, Yarn
- Webpack

Testing frameworks
- Jest
- Mocha, Chai

Containers / Cloud
- Docker
- Kubernetes
- Google Cloud Platform

EDUCATION

Sherbrooke University   2015
Master of Applied Science in Mechanical Engineering
GPA: 4.05/4.3

Sherbrooke University   2011
Bachelor of Mechanical Engineering and Aeronautics
GPA: 3.92/4.3

Ultimate Courses   2018
Angular/TypeScript certification

DISTINCTIONS

- Co-author of 7 scientific publications
- Lecturer in international conferences
- 5 graduate scholarships
- 3 Academic excellence awards
- International Patent Family application pending