JONATHAN VANDAMME
SOFTWARE ENGINEER

jovndmm@gmail.com
604 404 9669
North Vancouver

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 automates the generation of SQL to setup our tests
- Participated in the Backend and Front-end 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 redudant ARM microcontrollers
- Documented the processes according to the medical standards (IEC 62304)
- 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

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.

MASTER THESIS

Non-invasive online monitoring of respiratory mechanics during total liquid ventilation.
- Developed algorithms to estimate the lung pressure during total liquid ventilation

SKILLS
- Analytical abilities
- Quick learner
- Teamwork
- Dedicated
- Passionate

FRONTEND
- JavaScript, TypeScript
- Angular2+
- React, React-Native
- NGRX, Redux, RxJS
- Babel, Webpack
- SCSS
- Jest

BACKEND
- NodeJS, Express
- Mocha, Chai
- Firebase
- REST & GraphQL APIs
- MySQL, MongoDB
- Java, C/C++
- Haskell, Python
- 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