Joel Gallant

Cell: 403-826-5534 **Email:** joel@joelgallant.me

Driven, detail oriented, self taught and a candid software developer - with specialization in making the complex simple. I work hard and fast without sacrificing quality.

Skills

Advanced

- Javascript (ES6)
- CMake & Make
- Node (express, koa)

Intermediate

- JS Bundling (parcel, webpack, rollup)
- C++11
- Java 7+
- OpenCV & dlib
- Swift + iOS
- Python
- CSS / LESS / SASS

Familiar

- Declarative component frameworks (vue, react, ember)
- Ruby on Rails
- PostgreSQL
- MySQL / MariaDB
- CouchDB
- numpy
- Rust

Tools

- Version Control (git)
- Github, Bitbucket, etc.
- vim / tmux / zsh
- JIRA
- Continuous Integration & Deployment
- Unit Testing (gtest, jest)
- POSIX tools
- Windows 7/8/10
- Solidworks

Experience

Renoworks

Full Stack Software Developer (Jan 2017 - Present)

Developing software for frontend (mixture of jQuery, vue.js, and others) and backend (ASP, express, koa, J2EE) portions of Renoworks' core products. I have done work on the core rendering engine, iOS webview & native apps, API development, internal development tools, build tools and much more.

Most of my experience is migrating legacy code, data and architecture to a more maintainable platform. As part of a new team in the company, we have taken control of a complex web application with many integrations, mobile apps, etc. This work is ongoing and has accelerated the company's rate of growth.

The biggest challenge of this job is developing a sustainable platform with new, flexible requirements, while continuing to deliver projects for clients. The platform is flexible to deploy many different applications, with one single code base. This is all aided by the build system and infrastructure that I played a critical role in creating.

Draganfly UAV & Trace

Computer Vision Technologist (Apr 2015 - Dec 2016)

Responsible for developing, testing and integrating embedded Linux computer vision tracking software. Working with the state-of-the art short term general object trackers, high speed detection, machine learning classification and gesture control. Advancing techniques and integrating them into a low power system to control cameras and UAVs.

Tracking software developed controls an autonomous UAV, target assists in public safety situations, and is adaptable to any type of target. It is general purpose and capable of many different tracking tasks that are complex and real-time.

FIRST Robotics

FIRST Senior Mentor - 2014-2015

Supporting, recruiting and mentoring students & coaches for FIRST Robotics teams in Alberta.

My work had an impact on over 750 students across Alberta, giving them an opportunity to work hands-on with technology and engineering. I developed curriculum for high school robotics, electronics and programming. This work also allowed me to give talks and lessons about crucial elements of FIRST robotics.

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Interests

Free Software, Open Source, Linux
I have always been passionate about the moral and practical missions of free software
Electronics & Robotics
I have worked with a good amount of electronics and competed in 7 years of robotics competitions
Active Living
I'm passionate about staying healthy through hiking, basketball, weightlifting and cycling

Education

Bishop Carroll Self-Directed High School

High School Diploma, 2014

Achievements & Projects

Renoworks Visualizers (example: TruWood Siding)
I helped pioneer a new platform for Renoworks home renovation visualizers that is flexible, powerful and adheres closer to modern standards.

Trace Visual Intelligence
I joined the software team for Trace to create a fast target tracker onboard UAVs. My proprietary work outperformed the best available options in accuracy and performance.

FIRST Robotics
I was a founding student member and continue to mentor with Team 4334. In 2014, I led the team to a World Championship division semi-final, and the Chairman's award.

- Chairman's award for broad inpact in and out of STEM
- Over 15 official awards within 6 years of competing
- World division winner, the highest stage of competition

ATAlibj
In high school, I collaborated with members from other teams to develop a high quality Java library for use in FRC robots, generalizing many of the common approaches and problems faced.

Gordian Scripting Language
In my grade 11 year, I wrote an interpreter for a python-like scripting language that was run onboard an FRC robot. It used no external libraries and had a prototypical object model.

High School Robotics Curriculum
I was honored in my grade 11 and 12 years to write curriculum for online high school courses that were taken by over 50 students.

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