

Joel Gallant

Cell: 403-826-5534 Email: resume@joelgallant.io

Driven, detail oriented software engineer - with a passion for making complex systems simple. I work hard without sacrificing quality.

Skills	Expert	Strong	Familiar
	<ul style="list-style-type: none">TypeScriptNode.js (koa/express)React (+ redux/mobx)Rust (+ tokio)Go	<ul style="list-style-type: none">CSS / SASS / etc.PostgreSQLgRPC / protobufC++11/14/17Java	<ul style="list-style-type: none">PythonReact NativeSQL ServerSwiftVue.js
Tools	<ul style="list-style-type: none">CI (GitLab, CircleCI)Docker (+ compose)CI (build & deploy)Version Control (git)Unit TestingChrome Dev Tools	<ul style="list-style-type: none">GCP / AWSKubernetes (+ Helm)Linux sysadminAPMs (Datadog)E2E TestingGitHub / GitLab	<ul style="list-style-type: none">XCodeVisual StudioWindows 7+Solidworks

Experience

Cruise

Senior Software Engineer (December 2020 - Present)

Working on remote assistance of self-driving cars. Includes building backend services (Go, gRPC) to communicate in real-time with cars spread across cities, a heavy web app (React, WebGL) used for visualization and maneuver staging, video feed pipelines (WebRTC), all with high availability and stability requirements.

Working with many internal teams and customers, with integrations and many cross-functional projects. I've led project teams and managed execution, hitting aggressive deadlines.

Launchcode

Software Developer (July 2018 - October 2020)

Developing new solutions for our clients, internal tools and the PatronScan ID scanner. It consisted of a mixture of experience in backends (NodeJS, Koa, Postgres, MS SQL, etc.), frontends (React, Mobx, TypeScript), system software (Rust, C++, OpenCV, Tokio), devops and tooling.

I led a few teams and projects, with a variety of clients. The role included a fair amount of mentorship as well.

Renoworks

Full Stack Software Developer (Jan 2017 - July 2018)

Developing software for frontend (jQuery, Vue.js, ES6, JavaScript) and backend (ASP.net, express, koa, J2EE) portions of Renoworks' core products. I have done work on the core rendering engine, iOS ative apps, API development, internal tools, build systems and much more.

Most of my experience was migrating legacy code, data and infrastructure to a more maintainable platform. As part of a new team in the company, we took control of a complex web application, integrations, mobile apps, etc. This work accelerated the company's rate of growth and continues to push the business in the right direction.

Draganfly / 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.

Achievements & Projects

Remote Assistance

I've contributed heavily to multiple components in the RA stack. I helped build and rearchitect some of the critical business logic and data layer in backend services. I also built many of the newer frontend features necessary for Cruise to scale in driverless operations, and integrations with customer support tooling.

Patronscan ID Scanner Evolution

I developed a rewrite of the main Patronscan application logic for ID verification. The stack consisted of Rust, C++, OpenCV, gRPC, Node.js, Postgres and more.

SOL Health Care Platform

I led development of a health care facility management platform that empowers employees and managers. It has advanced scheduling rules and ties into payroll systems.

Dura Quotes Pipeline System

I built a back-office web application for a custom fabrication company in Calgary. It included a responsive PWA web app to manage their quotes, job tracking, invoices, timesheets and more.

Renoworks Surfaces

I helped rebuild one of Renoworks' core products, migrating much of the code into a flexible multi-deployment platform.

FIRST Robotics

I was a founding member and later on, a lead mentor, for Team 4334. In 2014, I led the team to World Championship semi-finals, and the Chairman's award.

- Chairman's award for broad impact in and out of STEM
- Over 15 official awards within 6 years of competing
- World division winner in our first year of competition

