

# Riley Paul *Full Stack Developer*

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5+ years of experience solving real-world problems by building data-driven web apps, distilling complex metrics to approachable visualizations, and saving man-hours through automation.

## PROFESSIONAL EXPERIENCE

**Front End Developer, Harris Computer, Service Link** [🔗](#) Aug 2023 – present | Vancouver, BC

- Performed comprehensive refactor of flagship React application to address substantial technical debt, greatly reducing bundle size and improving performance and reliability
- Led small team to re-imagine legacy Windows application as a performant, intuitive, web app which justified a 20% increase in licensing fees for overall software package

**Data Analysis Consultant, Macro Construction** Feb 2023 – May 2023 | Calgary, AB

- Performed analysis of geospatial, financial, and climate data to aid in the presentation of a contractual discrepancy suit
- Used custom geospatial Python libraries of my own design, as well as Pandas and Matplotlib
- Prepared clear and concise maps and figures outlining extenuating circumstances and barriers to success which were presented in a court of law

**Project Engineer, Macro Industries** [🔗](#) Mar 2021 – Aug 2023 | Chilliwack, BC

- Developed several internal tools using ReactJS, SvelteKit, Python Flask, and PostgreSQL to improve efficiency of coworkers by solving niche problems
- Accustomed to a demanding, highly dynamic work environment from on-site role with construction contractor
- Programmatically generated large, detailed site drawings, using self-developed method of AutoCAD automation, saving thousands of man-hours and reducing likelihood of errors
- Performed complicated analyses of geospatial, project controls, and natural resource data and created visualizations to allow for all stakeholders to clearly understand performance metrics and project specifications
- Pioneered aerial survey program; creating online database of 2D and 3D models using photogrammetry for use in construction planning, drawings, estimating and progress tracking

**Junior Project Engineer, SA Energy Group** [🔗](#) Jun 2019 – Mar 2021  
Western Canada

- On-site contract role on large-scale construction projects in Northern BC, Edmonton and Saskatchewan

## SKILLS

**Web Frameworks** — React, NextJS, Astro, SvelteKit, FastAPI, ExpressJS

**Languages** — Javascript, Typescript, Python, SQL, CSS, HTML

**Backend** — Database design, API design, Lambda functions, Cloudflare workers, CI/CD, VPS

**Frontend** — Responsive design, form validation, drag and drop, efficient data-fetching

## PROJECTS

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### **Weather Station Constellation & Reporting**, *NodeJS, CI/CD, SendGrid, Linux, OAuth, SQL*

- Private constellation of weather stations deployed along remote construction project in northern BC with NodeJS Linux server collecting data and sending daily summary report to project management to inform their decisions for the day
- Includes a frontend for updating station information and viewing weather from specific dates
- Multi-million-dollar contract changes approved due to adverse weather conditions captured by system

### **Plot Digitizer**, *Typescript, React, TailwindCSS, HTML Canvas*

- Web app to allow quick extraction of raw data from graphical representations
- Written in Typescript, React, and TailwindCSS, with an emphasis on using web standards technology
- Built as an original project to showcase frontend skills and used by engineer coworkers

### **AutoCAD Automation Library**, *Python, Object-Oriented Programming, Custom Library*

- Python library for generating AutoCAD scripts from GIS data to allow for drawing automation
- Created out of frustration at first engineering job when populating large drawings by hand
- Reduced time to complete a large site drawing by 95% (three months > three days) with far fewer errors

### **Chainage Photo Renamer**, *Python, GUI, Tkinter, Quadtree Optimization*

- Windows app renames photos taken in the vicinity of a linear construction project with the project chainage (distance in meters from the start of the project to location) of the photos' geolocation
- Utilized custom quadtree optimization algorithm for efficient computation of location
- Used by workers on two, billion-dollar projects to organize tens of thousands of jobsite images

## EDUCATION

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### **Full Stack Web Development Bootcamp**, *Lighthouse Labs*

Jan 2022 – Apr 2022

Node.js, Express, ReactJS, Testing, Ruby on Rails, Database Design, PostgreSQL

### **Bachelor of Mechanical Engineering**,

Sep 2014 – Apr 2019 | St. John's, NL

*Memorial University of Newfoundland* [!\[\]\(f1c5da15572e3e09d343161be98f508d\_img.jpg\)](#)

GPA 3.53 / 4.00, Mechanical Design Lead for Baja SAE Team for 3 years

## INTERESTS

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Outdoor Recreation | Photography [!\[\]\(83bbbd261710c59db0214aa27b2edc0d\_img.jpg\)](#) | 3D Printing