Shaina Rosell

Full-Stack Web Developer | Data Analyst | Visual Thinker

Passionate programmer blending design, art, and technology to build thoughtful web applications. Experienced in full-stack development and data analytics, with a strong focus on crafting intuitive front-end interfaces and scalable back-end systems. Skilled in using tools like Tableau for data visualization and driven by creativity and innovation in every project.

shaina.mrosell@gmail.com

(403) 542-6527

Calgary, Alberta, Canada

linkedin.com/in/shainamrosell/

shainarosell.me

EDUCATION

2017-2022 | **BSc, Computer Science** – Concentration in Human Computer Interactions (HCI)
University of Calgary | Calgary AB, Canada

TECHNICAL SKILLS

Languages:
JavaScript · HTML · CSS · jQuery · Python · SQL · R Scripting · Java · C++

***Libraries & Frameworks*:**
React.js · TypeScript · Tailwind.css · REST APIs · MERN Stack · Tanstack Query · Node.js · D3.js · Git

***Databases*:**
MongoDB, CouchDB, AWS S3, SQL, NoSQL

***Other*:**
AWS Athena SQL · Google BigQuery · Figma · Postman · Tableau Products · ArcGIS Pro · Full-Stack Development · Data Analysis · Data Visualization · Big Data

EXPERIENCE

Data Engineer - 07/2024 – Present
Software Developer - 05/2022 – Present
Intern Software Developer - 07/2020 – 08/2021
O2 Planning & Design Calgary, Alberta, Canada

O2 is a nationally recognized, collaborative studio that integrates urban design, planning, landscape architecture, ecology, data analytics, and engagement and communications in a holistic practice to create highly valued places.

- Sole software developer in the data analytics and engagement team, responsible for web application design, development, testing and deployment (**full-stack proficiency**)
- Implemented **React** web-based dashboard applications for clients and collaborated with diverse team of professionals including GIS Analysts to compile and present spatial data in web-apps.
- Designed and implemented functional, visually appealing interfaces—leveraging **UI/UX** tools like **Figma** and collaborating closely with graphic designers. Contributed to internal analysis tools with an emphasis on clarity and effective data visualization.
- Performed **data analysis and visualization** via **R/Python and Tableau**.
- Managed and analyzed large datasets (mobile cell data) using **Big query/AWS Athena**, designing and optimizing complex **SQL** queries to efficiently extract insights and support data-driven decision making
- Developed and optimized **Python scripts** to create custom geoprocessing tools in **ArcGIS Pro**, enhancing efficiency in modifying and preparing spatial data in ArcGIS Pro.

Key Projects

- Web app platform that integrates **ArcGIS Maps SDK** for JavaScript with **React.js** for building mapping and spatial analysis applications for the web: Calgary Region ESA Dashboard, Greener as We Grow
- Implemented Online Web Based Maps & Surveys for Public Engagement. **React.js** web application, integrated **leaflet.js** to overlay spatial data created in **ArcGIS**, allows users to comment and give feedback on specific locations on a map with context along with **survey.js** for a traditional survey experience. Uses a **CouchDB** server as the database along with **CouchDB API** to handle data. This was done for multiple municipalities for multiple use cases across Canada.
    - Examples: bikesharetoronto
- Internal Web Application - Engagement Data Analysis and Coding, Policies Database Management
    - Integrated **machine learning concepts** through **python** models to help with suggesting classifications for coding qualitative data.
    - Use of **d3.js** library for creating interactive data visualization charts
    - **React.js** frontend with **Tailwind, Tanstack Query, Node.js + Express** based backend **REST API** with **MongoDB** and **Postman** to document API endpoints.
- Developed Web-based Dashboards: Main Streets Metrics Program for the City of Calgary. Visualized latest datasets and metrics information on the chosen 24 Main Streets in Calgary. The dashboard integrated **leaflet.js** maps to show spatial data and **d3.js** for various visualization graphs across the dashboard. Main stack was **jQuery**, **require.js**, and **CouchDB** as the database
- Built the initial prototype of the Port Lands Story Stream App (formerly named Story Stream) which was O2's winning proposal submission for the 2021 "A new river innovation challenge" by Waterfront Toronto. The application was created using **React.js** with **tailwind.css** and **MaterialUI**. Backend consists of a **REST API (Node.js + Express)** backend with **mongoose** to interact with **MongoDB** database.

Personal Projects

Memory Mix (Nov 2024): An individual project submission for "Google Photorealistic 3D Maps Challenge". Memory Mix lets you upload, organize, and explore your photos on a 3D map, using the Places API to predict locations you've visited, creating a visual journey through your memories. This **React.js** app makes use of **Google Maps JavaScript API** with **Google's 3D Maps**. Check out the devpost for a full project overview. (https://devpost.com/software/memory-mix)