

Zachary Springer

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Technical Skills & Attributes

- Data engineering, Full-stack web development, Agile methodologies, Data Structures & Algorithms
- **Programming Languages:** JavaScript (React, Express, Redux), TypeScript (React Native), Python (Pandas, BeautifulSoup, NumPy), Java (Spring Boot), PostgreSQL, MySQL
- Git (GitHub, GitLab), Google Cloud Platform (GCP), Google Maps API, Leaflet Maps, HERE Maps API, Mapbox GL, Google Cloud PubSub, Github Actions, ESLint

Work Experience

Software Engineering Capstone Developer

Ecobadlandz | Mar. 2024 - Aug 2024 | Portland, OR

- Collaborated with an Agile team at a tech startup to develop the Minimum Viable Product (MVP) for two full-stack web and mobile mapping applications, focusing on EV charging station data.
- **Led backend development** using Java (Spring Boot) and MySQL, designing and implementing REST APIs for efficient data retrieval, validation, and integration between the frontend and backend.
- **Streamlined data access**, enabling the frontend to retrieve and display EV charging site location data from the database with improved performance and scalability.
- **Developed and styled** critical frontend components using **React**, **React Native**, and **Redux**, including map markers, custom callouts, navigation app handoffs, and dynamic filtering/search functionality.
- Set up and maintained GitHub Actions workflows, **automating code formatting and linting**, resulting in improved code quality and reduced time for code reviews.

Transit Data Pipeline and Visualization

Self-Directed Project | May 2023 - Aug. 2023

- Designed and implemented an **automated data pipeline** over Google Cloud Pub/Sub to gather, process, and visualize Portland bus stop data.
- **Developed Python scripts** utilizing Pandas to validate, clean, and transform data from two sources into a unified dataset stored in a PostgreSQL database.
- Automated the entire pipeline using system scheduling on two Linux VMs, **improving data processing efficiency** and reducing manual intervention.
- Integrated the dataset with **Mapbox GL** for visualization, allowing real-time display of bus stop data on an interactive map.

Portfolio Site

Self-Directed Project | Aug. 2024 - Oct. 2024

- Developed a personal portfolio website to showcase projects, skills, and experience, using **React** for the frontend and **Bootstrap** for responsive design.
- Implemented **Framer Motion** to create smooth animations and transitions, enhancing user experience and engagement.
- Utilized **JavaScript** to create interactive components and navigation, including dynamically loading content to improve page load speed.

Education

Portland State University

Bachelor of Science, Computer Science | August 2024

