

# Chris Carstens

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Environmental professional seeking to transition to a software developer role in the Denver/Boulder area. I have experience managing complex, multi-year projects. I enjoy making sense out of complicated technical problems and delivering quality solutions. I love to learn, and would be happy to get up to speed on any technologies or domain knowledge required for your project.

## SKILLS

Java, Spring (Boot), Maven, PostgreSQL, MongoDB, JavaScript, TypeScript, Node.js, Express, React, Next.js, Webpack, Docker, Python

## SOFTWARE PROJECTS

### Issue Tracker

- Developed a web application for software professionals to manage feature development, bug-fixing, etc. using a ticket system. The application consists of a Java/Spring/PostgreSQL backend and a TypeScript/React frontend.
- The application includes OAuth 2.0 authentication and authorization. Role-based access control allows users to submit, modify, and assign other users to issues, provided they have the appropriate permissions.
- Used test-driven development (TDD) to write unit and integration tests for the backend REST API with JUnit, AssertJ, Mockito, and Spring MockMvc.
- Tools used: Java, Spring, Spring Boot, PostgreSQL, Auth0, TypeScript, React, Next.js, Tailwind CSS, Docker

### Water Quality Dashboard

- Implemented a prototype water quality dashboard showing canal flow rate and salinity data for the Lake Worth Lagoon for use by water management professionals. The application includes data visualizations and a map view. The backend API synthesizes data from multiple sources, transforming API requests into a unified JSON format on the backend.
- The prototype was used by the County's IT department to develop the production application.
- Tools used: JavaScript, Node.js, Express, Chart.js, Mapbox GL JS, Webpack

### YelpCamp

- Developed a web application that allows users to share and review campgrounds as a course project. The application includes authentication and authorization, image upload and cloud storage, and a geocoded map view.
- Tools used: JavaScript, Node.js, Express, MongoDB, Passport.js, Cloudinary, Mapbox GL JS, Bootstrap

## PROFESSIONAL EXPERIENCE

Palm Beach County Dept. of Environmental Resources Management

West Palm Beach, FL

### Project Manager

August 2019 – Present

- Successfully managed multiple \$1-2M environmental restoration construction projects from start to finish.
- Drafted technical specifications for two \$10M+ dune and beach restoration annual construction contracts. Reviewed bid packages prior to awarding contracts, coordinated with contractors, and supervised work performed under contract.
- Secured \$5M+ in grant funding from state and local governmental agencies. Completed all monitoring and reporting requirements, and submitted reimbursement requests in a timely manner.
- Created geographic data visualizations using the ESRI GIS software suite, including ArcMap.
- Led a team of four employees during manager's two month leave of absence. Attended staff meetings, communicated time-sensitive decision-making information to upper management, and assisted teammates to work through blocking issues, all while continuing to complete regular work assignments.
- Completed FAA training and certification requirements to establish a departmental unmanned aerial vehicle (UAV) program. Drafted an operational plan for the program, and collected data that was used to support requests for \$7M+ in emergency funding from federal and state agencies to repair hurricane-related erosional damage to County beaches.

## EDUCATION

FLORIDA ATLANTIC UNIVERSITY  
B.S. Geology, *summa cum laude*

Boca Raton, FL  
August 2018