

Chris Carstens

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Environmental professional seeking to transition to a software developer role. 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

- 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