Paul Carlson

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Education

Rensselaer Polytechnic Institute   **Aug. 2024 – Present**
Bachelor of Computer Science & Bachelor of Information Technology and Web Science   Troy, NY
GPA: 3.55
Relevant Coursework: Data Structures, Web Systems Development, Foundations of Computer Science, Computer Architecture & Operating Systems

Experience

East-SouthEast, LLC   **May 2025 – Present**
Web & Geospatial Technology Intern   Chatham, MA
- Architected and built a professional-grade web mapping application from a legacy system, reducing update deployment time across nine towns from hours to minutes.
- Collected precise property and topographic survey data in the field using high-tech equipment, including GPS receivers and total stations.
- Assisted with survey workflows by performing background data work and digitizing linework in Carlson Survey CAD software.
- Digitized over 100 sewer plans in QGIS to build a new interactive map from scratch, making critical infrastructure data accessible to residents.

Sweet Dreams Ice Cream & Candy   **May 2023 – Aug. 2025**
Team Manager & Sales Associate   Chatham, MA
- Managed daily store operations, including opening/closing procedures and staff oversight.
- Resolved customer issues and ensured a high-quality service experience.

Projects

Interactive GIS Map | East-SouthEast, LLC Internship
- Delivered a dynamic, single-codebase web map serving 9 towns, featuring a suite of commercially valuable tools.
- Developed commercially valuable tools with JavaScript and Mapbox, including a dynamic legend and a multi-page printing utility.
- Built a high-performance, cost-effective tile loader for USGS maps, bypassing expensive third-party APIs.

Fraternity Stewardship Hub | Phi Gamma Delta (Tau Nu)
- Developed a full-stack web app with React and Appwrite to manage a fraternity's budget, now in active use.
- Built an admin dashboard with dynamic budget tracking and a member portal with Google OAuth for purchase suggestions.
- Engineered a custom text parser to enable quick, bulk-import logging of items from receipt text.

Personal Portfolio | Personal Projects
- Built a responsive portfolio with React and Vite, using Appwrite as a BaaS for dynamic project management.
- Implemented a secure admin panel with authentication for CRUD operations on project data.
- Engineered a custom, privacy-focused analytics system to track pageviews and user sessions.

Munsell Color Mapper | Personal Projects
- Currently rearchitecting a cross-platform mobile app in React Native to automate soil color identification
- Defining the new component architecture and state management for features like image capture and color analysis.
- Adapting initial color-matching algorithms, first prototyped in Python, for integration into the React Native framework.

Technical Skills

Languages: JavaScript, C++, Python, HTML, CSS, PHP
Frameworks & Technologies: React, Appwrite, Mapbox, React Native, Azure, Tailwind CSS, Vite, Expo
Developer & Geospatial Tools: GitHub, QGIS, VS Code, GPS & Total Stations

Leadership / Extracurricular

Fraternity | Phi Gamma Delta (Tau Nu)   **Spring 2025 - Present**
Stewardship & Public Relations Chair   Spring 2025 – Present
- Manage the fraternity's Instagram presence, creating content to promote events and fundraising campaigns to drive community engagement.
- Responsible for the chapter's household logistics, including managing the meal plan budget and procurement of supplies for all members.

RPI Ski Club   **Fall 2024 - Present**
Executive Board, Social Media Chair   Fall 2024 – Spring 2025
- Grew the club's online community via Instagram and facilitated collaborations with other organizations for planning trips and events.

Eagle Scout | Boy Scouts of America   **Nov. 2023**
- Led a team to build and install three community benches, managing the project from initial design and fundraising to final installation.