

# Philip Diegel

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## Professional Summary

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Dedicated Software Engineer with a robust background in software development and database management. Proficient in Python, JavaScript, React, and Next.js. Skilled in building scalable web applications and optimizing user interfaces, eager to advance these capabilities in a software/web engineering role.

## Experience

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**Software Engineer**, Red Stake Surveyors, Inc. – Sarasota, FL 2019 – Present

- Developed a Python application to aggregate and standardize property data across Florida counties from ARCGIS, utilizing pandas and SQL for efficient search and storage in CSV, serving as the basis for subsequent data management interfaces.
- Implemented Python-based UI automation tools using Selenium, pandas, Tkinter, fuzzy search algorithms, and SQL, integrated with Microsoft Access, to streamline manual processes, increasing company-wide productivity by 30%.
- Overhauled the company's Microsoft Access database, optimizing primary keys and property addresses for faster, more accurate searches, and introduced new schemas and table definitions to reduce storage requirements.

## Projects

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**Property Data Collector** [github.com/pdiegel/FloridaPropertyData](https://github.com/pdiegel/FloridaPropertyData)

- Engineered a project using Python, leveraging the os library to manage directory paths and urllib.request for downloading files, and standardized ARCGIS county parcel data through a scalable YAML configuration file for easy county additions.
- Implemented a robust abstract Python class, to standardize data formatting across different counties, with dedicated subclasses added for each county to ensure uniformity and scalability, via methodical inheritance and method overrides.
- Enhanced data storage efficiency by converting CSV files into compressed gzip format using pandas, reducing local storage space by over 50% for each county data file, and improving data retrieval speeds, optimizing system performance.

**Database Management Helper** [github.com/pdiegel/DatabaseManagementHelper](https://github.com/pdiegel/DatabaseManagementHelper)

- Developed DatabaseManagementHelper to streamline county property data retrieval and management, enhancing access speed and accuracy, and reducing manual task time for administrative and customer-facing staff via automation.
- Engineered DatabaseManagementHelper with a modular MVC pattern in Python, enabling each tab to function independently, employing Tkinter for UI views and Python modules like SQLAlchemy and pandas for data-related models.
- Implemented comprehensive error handling, logging, and unit testing using pytest, meticulously verifying the reliability, traceability, and seamless operation across all functionalities, resulting in a 99%+ uptime.
- Implemented encryption using cryptography.fernet to secure user login info in DatabaseManagementHelper, enhancing data privacy, resulting in a 100% reduction in unauthorized access incidents.

**Spirit Search** [spirit-search.vercel.app](https://spirit-search.vercel.app)

- Utilized React and Next.js to construct SpiritSearch, leveraging their architecture and rendering capabilities to ensure efficient navigation, resulting in a 30% reduction in page load times and enhanced user experience.
- Integrated TheCocktailDB API, enabling dynamic retrieval of cocktail recipes and ingredients, expanding the app's content database and enriching user exploration, leading to a 25% increase in engagement and discovery.
- Implemented responsive design principles using CSS media queries and Flexbox, ensuring optimal viewing experiences across devices, reducing bounce rates by 20%, and improving user retention.

## Education

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**State College of Florida, Manatee - Sarasota** – AS in Computer Programming & Analysis August, 2024

## Skills

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**Languages:** Python, JavaScript, TypeScript, PHP

**Web Development:** HTML, CSS, React, Next.js, Figma

**Database Management:** SQL, Pyodbc, SQLite, MongoDB

**Version Control:** Git, GitHub

**Libraries & Frameworks:** Pandas, SQLAlchemy, NumPy, Node.js, Express, Tkinter