Santiago Alvarez

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EDUCATION

Assumption University   **Worcester, MA**
B.S. in Computer Science   *Expected Graduation, May 2025*

PROJECTS

Flight Finder
Python | Tequila API | OOP | Sheety API | Twilio API | Bitly API | WhatsApp Notifications
- Developed a program that continuously monitors flight prices and alerts users via WhatsApp when low-cost flight deals are found.
- Integrated the Tequila Flight Search API and Sheety Google Sheets API to dynamically search for flights based on spreadsheet data.
- Implemented the Twilio API to send deal alerts directly to users' phones for them to purchase the flight.

Password Manager
Python | Tkinter | JSON
- Developed a GUI-based Password Manager using Python's 'tkinter' library, allowing users to securely generate, save, and retrieve passwords associated with specific websites and usernames.
- Integrated a password generation module that produces strong and secure passwords.
- Implemented a JSON storage system, enabling saving and retrieving user credentials.
- Incorporated error-handling mechanisms, preventing potential application crashes.

TriviaMaster
Python | Tkinter | requests | API Integration | OOP
- Developed a quiz application, sourcing true/false questions in real-time from the Open Trivia Database using Python's 'requests' and 'tkinter' library.
- Structured the application using modular design principles, segregating data fetching, question modeling, quiz logic, and user interface into separate modules for enhanced maintainability.
- Incorporated error-handling mechanisms to manage potential issues arising from API requests.

Rain Alert via SMS
Python | OpenWeatherMap API | Twilio API | Python Anywhere
- Developed a weather notification system, that notifies via SMS about imminent rainfall using real-time data sourced from the OpenWeatherMap API.
- Processed hourly weather forecasts to determine rain probabilities within the next 12 hours.
- Python Anywhere automatically runs the program every day at 7 am, ensuring users receive timely notifications.
- Integrated with the Twilio API to send SMS notifications to users.

Pong Game
Python | Tkinter's turtle module | OOP
- Developed a Pong game using Object-Oriented Programming (OOP) principles and Python's turtle module.
- Designed game components such as paddles, ball, and scoreboard as individual classes, promoting modularity and reusability.
- Utilized inheritance and encapsulation to streamline code and manage game components efficiently.

Activities

Assumption Men's Tennis   *Jan 2023 – Present*

- Dedicated 15 hours per week for practices, games, and travel, balancing academic and work commitments.
- Learned valuable skills including discipline, teamwork, time management, sacrifice, and more, which were essential both on and off the court.

SKILLS

Programming: Python, C++, HTML, CSS, JavaScript
Tools: PyCharm, Visual Studio Code, CLion