

# Overview

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As a software engineer, I wanted to expand my knowledge of Python networking and web development by creating a real-time data application. I built a SpaceX Launch Tracker that demonstrates my ability to work with external APIs, handle HTTP requests, and create interactive web interfaces.

I wrote a Python web application using Flask that fetches real-time SpaceX launch data from external APIs. The software displays current launch information, recent launches, and allows users to search for specific launches by ID. The application features a modern web interface with Bootstrap styling and includes comprehensive error handling for network issues.

My purpose for writing this software was to demonstrate proficiency in Python networking concepts, including HTTP requests, API integration, JSON data parsing, and web development. This project showcases my ability to build scalable applications that interact with external data sources while providing a user-friendly interface.

[Software Demo Video](#)

## Development Environment

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I used Visual Studio Code as my primary development environment with Python extensions for syntax highlighting and debugging. The project was developed on Windows 10 using Python 3.9+.

I used Python as the primary programming language with the Flask web framework for the backend server. Key libraries included the `requests` library for HTTP API calls, `json` for data parsing, and `datetime` for date handling. The frontend uses HTML5, CSS3, and JavaScript with Bootstrap 5 for responsive design.

## Useful Websites

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- [Flask Documentation](#)
- [Python Requests Library](#)
- [Bootstrap Documentation](#)
- [SpaceX API Documentation](#)
- [Launch Library 2 API](#)

## Future Work

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- Add user authentication and personalized launch tracking
- Implement real-time notifications for upcoming launches
- Add data visualization charts for launch statistics
- Include rocket core landing information and success rates