

Engineering
& Computing

School of Computing & Information Science

Spring 2025 Senior Design Project

Travelbuddy

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PROBLEM

In today's digital age, planning a trip often involves juggling multiple platforms one for booking flights, another for accommodations, a third for finding local attractions, and yet another for events and weather updates. This fragmented experience can be overwhelming, time-consuming, and inefficient for travelers.

Most users are forced to:

- Navigate several unrelated websites to gather basic trip information.
- Manually compare prices and availability across different platforms.
- Miss out on local events or hidden attractions due to lack of centralized data.

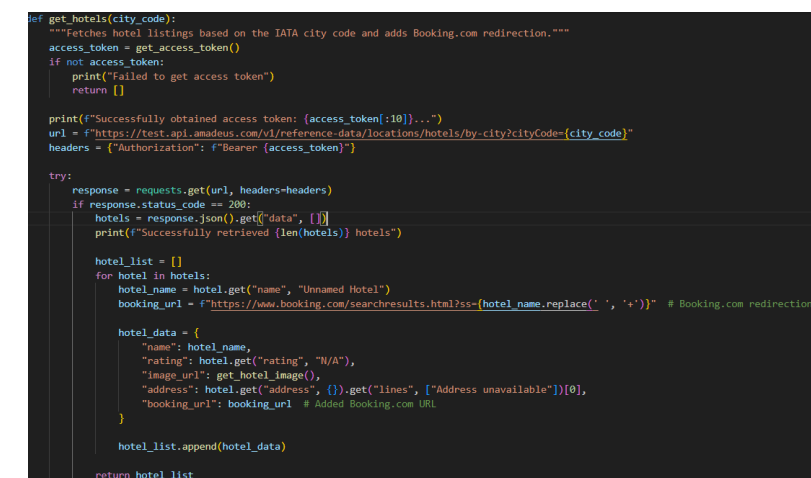
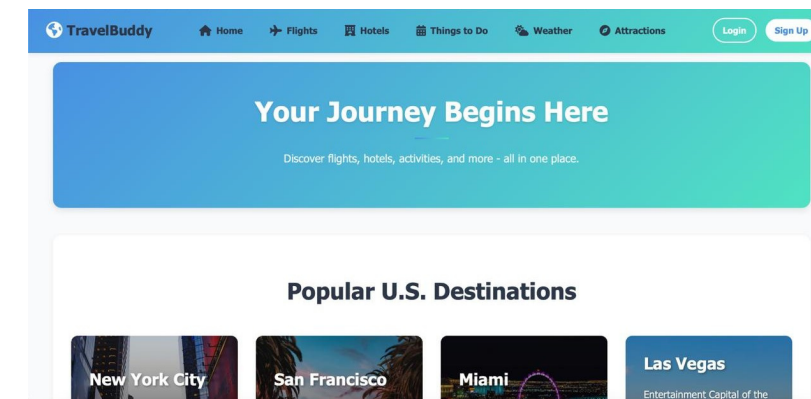
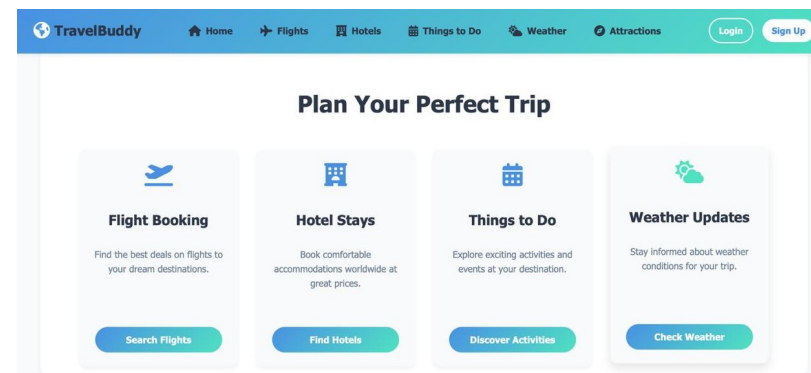
This disjointed approach increases planning fatigue and can lead to missed opportunities, especially for spontaneous or last-minute travelers. Furthermore, many travel apps focus on just one aspect of the journey leaving users to fill in the gaps themselves. Our goal is to change that.

The Travelbuddy App was designed to simplify the travel experience by consolidating essential services flights, accommodations, events, attractions, and weather into one intuitive and user-friendly platform. By streamlining the planning process, users can focus more on the excitement of travel and less on the logistics.

ACKNOWLEDGEMENT

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CURRENT SYSTEM



Efficiently connects users to real-time hotel data
and third-party booking links

FEATURES IMPLEMENTED

✈️ **Flights** – Users input origin, destination, and date; redirected to Expedia with search pre-filled.

🏨 **Hotels** – Hotel listings via Amadeus API with Booking.com redirection.

🎫 **Events** – Integration with Eventbrite and Ticketmaster APIs, filterable by city, type, and date.

📍 **Attractions** – Google Places integration for points of interest by category and rating.

🔑 **Authentication** – User registration, login, email verification via Flask-Mail.

☁️ **Weather** – (In Progress) Planned integration with Tomorrow.io for live weather and forecasts.

SYSTEM DESIGN / ARCHITECTURE

- Flask app with modular structure: app.py routes UI, logic separated into helper functions.
- Environment variables and api_keys.json for secure API access.
- Templates rendered using Jinja2 (HTML/CSS).
- SQLAlchemy models handle database interaction.
- Caching to improve performance in location and event searches.



{json:api}



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