

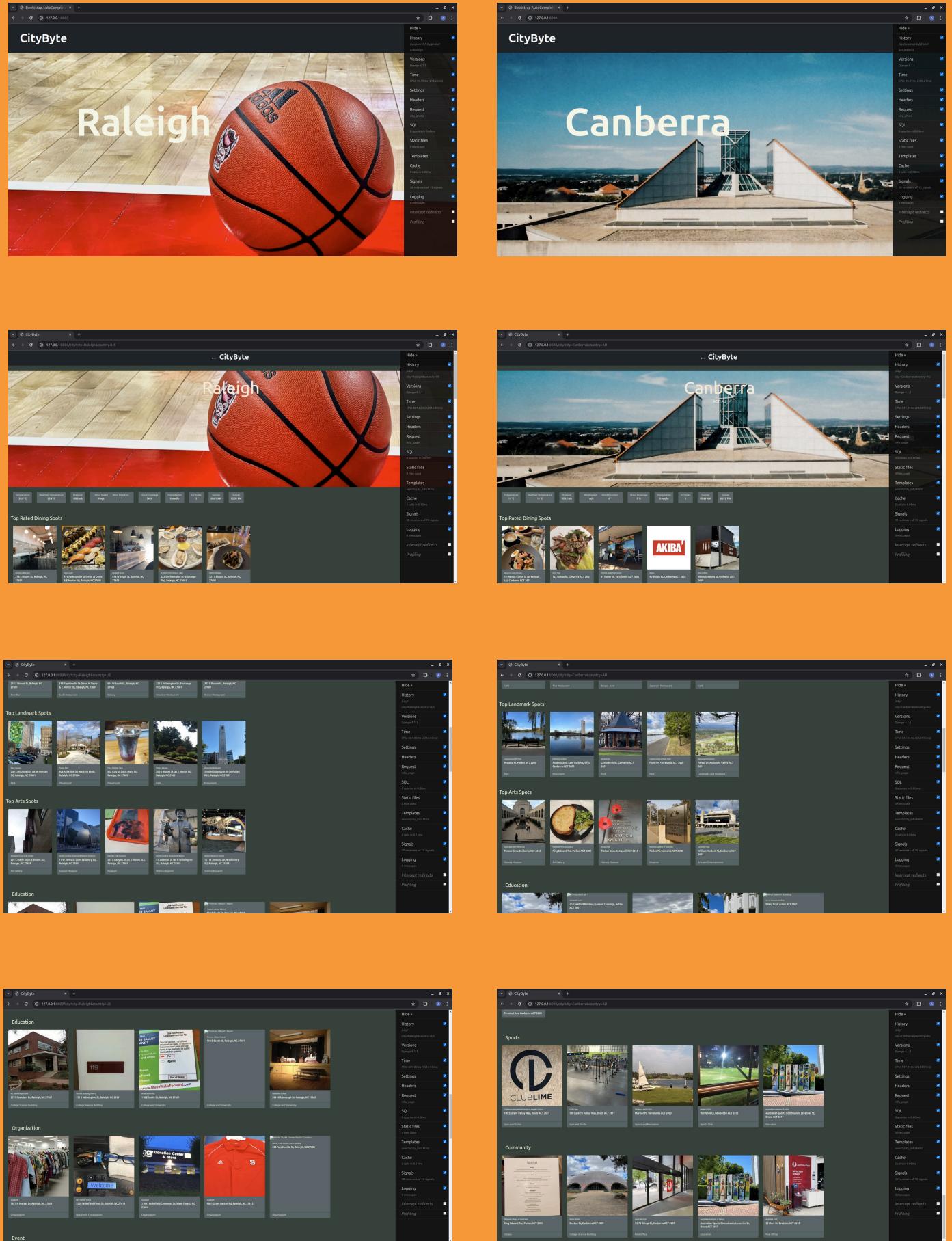
Citybyte

Group 8
Ashwattha Phatak
Anish Mulay
Akshay Dongare

WHAT IS CITYBYTE

- CityByte is your ultimate companion for urban exploration and relocation planning.
- This innovative platform offers a comprehensive snapshot of cities worldwide, providing essential information on everything from dining and entertainment to education and healthcare.
- With its user-friendly interface and lightning-fast performance, CityByte delivers instant access to curated city data, helping you make informed decisions about where to live, work, or visit.
- Whether you're a curious traveler, a potential mover, or a local looking to rediscover your city, CityByte's powerful features and constantly updated information ensure you'll always have the most relevant urban insights at your fingertips.
- Don't leave your city choices to chance – let CityByte guide you to your perfect urban destination today!

SNAPSHOTS



WHY VERSION 2 WAS BETTER

- Expanded Features: New categories such as health, travel, and community have been added, broadening the information provided about cities.
- Caching with Redis: This enhancement reduces API call times by storing city data after the first request, improving response times for repeated queries.
- Multiprocessing: The implementation of multiprocessing allows simultaneous API calls, significantly speeding up data retrieval compared to the previous serial approach.
- 4 Test Cases to ensure system reliability.

TECH STACK



- The CityByte project leverages a modern and versatile tech stack to power its comprehensive city information platform.
- On the backend, Python 3 and Django are used for efficient, scalable development with a clean, pragmatic design.
- The frontend combines HTML, CSS, and JavaScript, enhanced with Bootstrap for responsive, visually appealing interfaces that ensure seamless performance across devices and screen sizes, while allowing flexibility for future technology integrations.
- To maintain high code quality, Pytest is employed for testing.
- Redis is used for caching to optimize performance.
- Additionally, the use of multiprocessing to handle concurrent API requests demonstrates the team's commitment to scalability and efficiency.

WHY WILL OUR VERSION BE BETTER AND HOW?

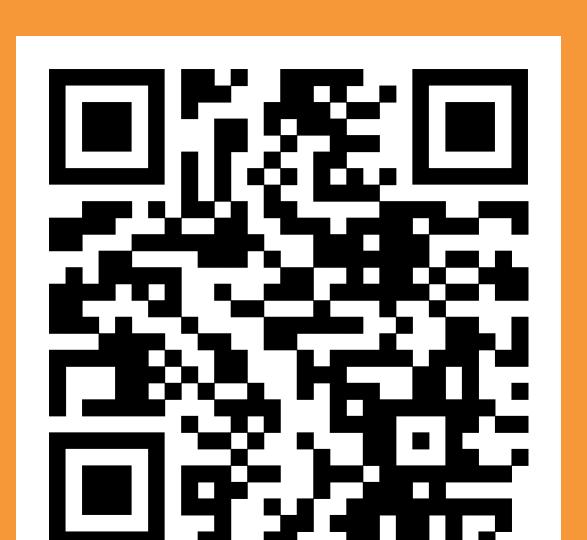
- The CityByte project will be undergoing several key enhancements to improve scalability, usability, and performance. One of the major updates will be the introduction of containerization using Docker and Docker Compose, which will streamline deployment and ensure consistent environments across different systems. This change will be making it significantly easier for developers to replicate the application locally or in production environments with minimal setup effort.
- We will also be integrating a Large Language Model (LLM) wrapper to optimize the platform's location search capabilities. This enhancement will provide more accurate and contextually rich search results for each city, offering users better-targeted information and improving their overall experience.
- We will introduce robust testing with more comprehensive and higher volume of test cases to ensure coverage and reliability.
- Lastly, we will be upgrading the project documentation to include comprehensive guides on the application's architecture, features, and deployment processes. These improvements will make the system easier for contributors and developers to understand, extend, and maintain. Together, these updates will significantly enhance the usability, functionality, and accessibility of the CityByte platform.



Gemini



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