Sydney Events Aggregator – Project Report

1. Introduction

The Sydney Events Aggregator is a full-stack web application developed to automatically collect, store, and display information about events happening in Sydney. The system scrapes real event data from multiple public sources, stores it in a database, and presents it through a web interface.

2. Objectives

The objectives of this project include automated event scraping, persistent data storage, duplicate prevention, a simple web interface, and scheduled background updates.

3. System Architecture

The application follows a client-server architecture. A backend server handles scraping and database operations, while the frontend fetches and displays data through API endpoints.

4. Technology Stack

Backend: Node.js, Express.js. Web Scraping: Axios, Cheerio. Database: SQLite. Scheduling: node-cron. Frontend: HTML, CSS, JavaScript.

5. Event Sources

The system scrapes events from multiple public websites including Eventbrite and AllEvents. Each event clearly indicates its source in the UI.

6. Data Model

Each event record includes title, description, city, date, venue (if available), source, source URL, status, and last scraped timestamp. Duplicate entries are prevented using unique source URLs.

7. API Endpoints

The backend provides endpoints for viewing events, triggering scraping, and serving the frontend UI.

8. Automation

A cron job is configured to automatically scrape events every six hours, ensuring updated data without manual intervention.

9. Frontend Design

The frontend displays events in a clean card-based layout with color-coded source badges, focusing on clarity and usability.

10. Assignment Compliance

The project fulfills all assignment requirements including multiple sources, automation, database storage, and a functional web interface.

11. Conclusion

The Sydney Events Aggregator demonstrates a complete full-stack solution that integrates scraping, automation, data storage, and frontend presentation in a maintainable and extensible manner.