

# SIT725 - Task 5.1P

## Student Information

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- **Task:** 5.1P - User Story and Sprint Backlog Decomposition

## User Story

**As a** student looking for local events, **I want to** browse and search for events on an interactive map with filters, **so that** I can easily discover activities happening near my location and decide what to attend.

## Sprint Backlog Tasks

Task #	Task Description	Estimated Hours
1	Set up MongoDB schema for events collection with geospatial indexing (coordinates field)	2
2	Create GET /api/events endpoint that accepts query parameters (category, date, radius)	3
3	Implement geospatial query logic using MongoDB's \$near operator for location-based search	4
4	Build HTML page with Google Maps API integration and map container	2
5	Write JavaScript function to fetch user's current location using browser geolocation API	1
6	Create map markers for each event returned from the API and display on Google Maps	3
7	Implement filter UI with dropdowns for category, date range, and distance radius	2
8	Add event listener to filter form that triggers API call with selected filter parameters	2
9	Create info window component that displays event details when marker is clicked	2
10	Implement marker clustering for better performance when many events are in the same area	3
11	Add loading spinner while fetching events and hide when map is populated	1
12	Write error handling for failed API calls and display user-friendly error messages	2

Task #	Task Description	Estimated Hours
13	Style the map page with CSS to make it responsive on mobile devices	3
14	Test map functionality with different filter combinations and validate results	2
15	Test geolocation across different browsers (Chrome, Firefox, Safari)	2

**Total Estimated Hours:** 34 hours

**Submitted By:** Antheis Maxenn (s217551712)

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**Unit:** SIT725 - Web Application Development