Luke Piper, Eszter Scarlett-Herbert, Riley Flanagan, Kristie Koorts

COSC345 Assignment 1

Executive Overview:

Team Name: Luke Legends
Project App: Eventures

Introduction:
Eventures is an event finder application catering to New Zealand's local events. Utilising the Eventfinda web API for an event dataset and the Land Information NZ dataset for addresses, Eventures creates a user-friendly interface, enabling students and newcomers to easily locate engaging sports, music, and various other events in their areas. This app aims to bring people together, fostering a sense of community and excitement as users explore and discover activities for their weekends.

Key Feature:
Eventures' key feature is its visual map, setting it apart from other event finder applications. By presenting a visual overview, Eventures makes it easy for individuals to make informed decisions about attending various events based on their proximity and otherwise user-defined event type filter values.

Target Audience:
The primary demographic of stakeholders the application is catered toward is individuals who are looking to branch out and are interested in discovering local events, exploring their surroundings, and connecting with their community. Given this, the target audience for the design will be University students, with ages ranging from 18 to 26. However, due to the broad potential for users, the range could be much greater.

Market Potential:
The demand for event discovery applications has experienced a significant surge, as evidenced by 2900 searches for "event finder" in New Zealand during July 2023 alone. In this growing market Eventures presents a comprehensive solution through its unique visual interface and advanced event filters. Allowing users to pinpoint events happening in their region and enabling a unique level of customisation, setting Eventures apart from competitors and delivering a unique user experience.

Introduction:

Eventures is an event finder app for local events in New Zealand. It uses the Eventfinda web API and Land Information NZ datasets to offer an easy interface for users to discover sports, music, and other exciting events in their area. Our target audience is University students who

are new to their area and seeking fun activities to enjoy over the weekend. The application however will be applicable to all forms of user, encouraging event discovery and attendance.

Organisation - People and roles:

Riley Flanagan - 2011275 - riley.flanagan15@gmail.com

Riley is a strong coder, developer, and leader with extensive experience in back-end development, as well as C++ and front-end web development. With this background, Riley will assume the role of Surgeon (chief programmer) and lead the development of the application.

Eszter Scarlett-Herbert - 2779629 - eszteryelena@gmail.com

Eszter has previously collaborated on projects during high school and in ANDIE last semester. Her domain experience includes Java, Python and C#, and she is also a strong artist. Because of Eszter's artistic background, she will lead the development of our app's visual GUI, as well as manage our pipeline and testing, roles she successfully undertook in her ANDIE project.

Kristie Koorts - 3964956 - kristiekoorts@gmail.com

Kristie has experience in C++, Python, and Java and possesses a wide range of knowledge in high-level programming and team collaboration from her role as a Junior Software Developer at ARL and her university experience. Due to her versatile skill set, we have assigned her a flexible role, allowing her to jump in and assist with the features that require the most attention.

Luke Piper - 3648114 - luke.piper2003@gmail.com

Luke is a strong leader and programmer with experience in Java, C, Python, and web development. His background includes database query retrieval and processing, as well as think tank problem segmentation and analysis, leading to the development of creative and effective solutions.

Project Breakdown:

Our datasets:

1. Eventfinda Event dataset - Eventfinda Developer API: Events
2. Land Information NZ addresses - Land Information NZ

The datasets we have decided to explore include the Eventfinda Event dataset and the Land Information New Zealand data service NZ Addresses dataset. The event dataset contains information on event details, including event name, location and type, while the addresses dataset contains information on physical addresses in New Zealand, with their respective coordinates superimposed over a map.

These sets have been chosen as it is strongly believed that the collation of their respective data could produce a meaningful and useful application. The datasets were selected over others as they originate from reputable sources and contain both useful and plentiful information. These APIs are also live and regularly updated allowing for automatic data updates.

Why these datasets go together:

These datasets complement each other to create a new product. The current event dataset, although providing informational data, does not present this information visually. However, by combining these datasets, the event data can have its location reflected, with data points superimposed on top of a map, resulting in an improved visual interface. With this combination, the user is not required to visit each individual event webpage to determine the event's location on a map. This implementation will showcase the locations of events in and around the user-defined area, enabling a proximity representation relative to the user and other events. It will encourage the discovery and attendance of events, which can be filtered and searched based on the user's preferences, allowing for a personalised experience.

Project Description:

What are we going to build:

Our app will provide users with an easy-to-use platform that combines location and event data to showcase a range of events happening around New Zealand. Through an interactive map, users can easily explore the various events happening around the country. This map will enable users to search for events based on both date and geographical location simultaneously, enhancing the convenience and efficiency of event discovery.

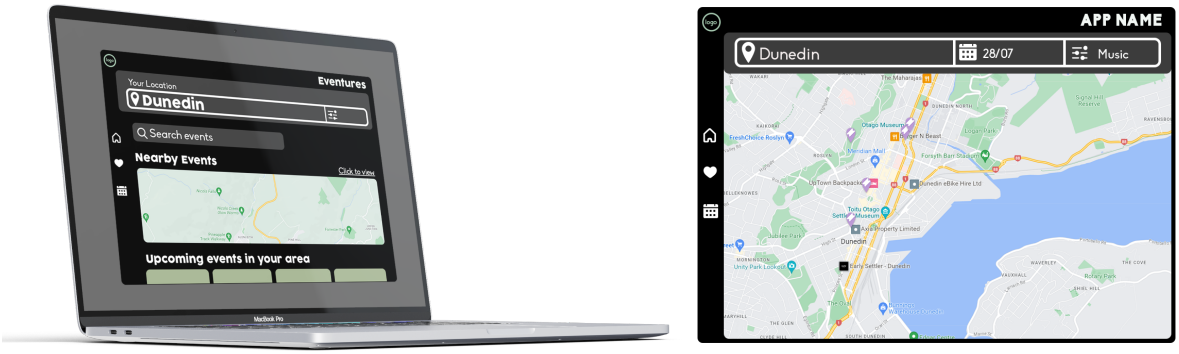


Fig 1: Displays product mock-ups showcasing the design of various features within the Eventures application.

Functional Requirements:

Quality	Requirement
Interactive map	• The app shall have an interactive map to integrate the location and event data. The app shall display events in New Zealand on a map in their corresponding geographical location. • The events displayed on the map shall have unique icons and a key so that users can easily identify events by type. • The app shall allow users to move around the map to explore various events in different regions.
Date navigation	• The app shall display events based on a date provided by the user. • The app shall allow the user to enter a date range to view the events in this area.
Event description	• The app shall allow users to select events on the map to see a description of the event. • The event description shall contain relevant information about the event, including the name, date, time, and location. • The event description shall contain the event type, ticket price and ticket.
Filters	• The app shall allow users to apply filters to the map to refine the events displayed. • The app shall allow users to filter events by Event type. • The app shall allow users to filter events by Ticket price. • The app shall allow users to filter events by Age Suitability. • The app shall allow users to filter events by Indoor or outdoor events.

Non-Functional Requirements:

Quality	Requirement
Performance	• The app should load events and provide search results quickly and efficiently; response times for user operations should all be within 2 seconds.
Compatibility	• The app should be compatible with various Windows operating systems.

	● The app should be designed to have a responsive user interface that is compatible with different screen sizes to provide a consistent user experience.
Usability	● The app should have an intuitive user interface that allows users to navigate the events around New Zealand easily. ● The average user should be able to use the app without needing to read instructions.
Reliability	● The app should have robust error-handling mechanisms to minimise disruptions to users. ● The app should maintain accurate and up-to-date event details.

Project Management Approach:

Our team has decided to implement the Scrum approach of Agile methodology for the project management of the Eventures app.

The Scrum Agile approach will encourage our team's collaboration through effective communication. Our team has opted to implement daily stand-up meetings where each member can share their progress, obstacles they are facing, and their projected task completion.

These meetings will ensure that each team member remains aligned with the project's broader vision and will enable us to swiftly identify and address any obstacles a member may be facing. This will help our team mitigate any potential delays and ensure our project stays on-track.

The Scrum approach will also enable flexibility throughout the app development process. The constant communication and collaboration among the team will enable us to readily adapt to emerging changes. This flexibility will be beneficial as we encounter unforeseen obstacles and as we refine our app's functionality based on user feedback.

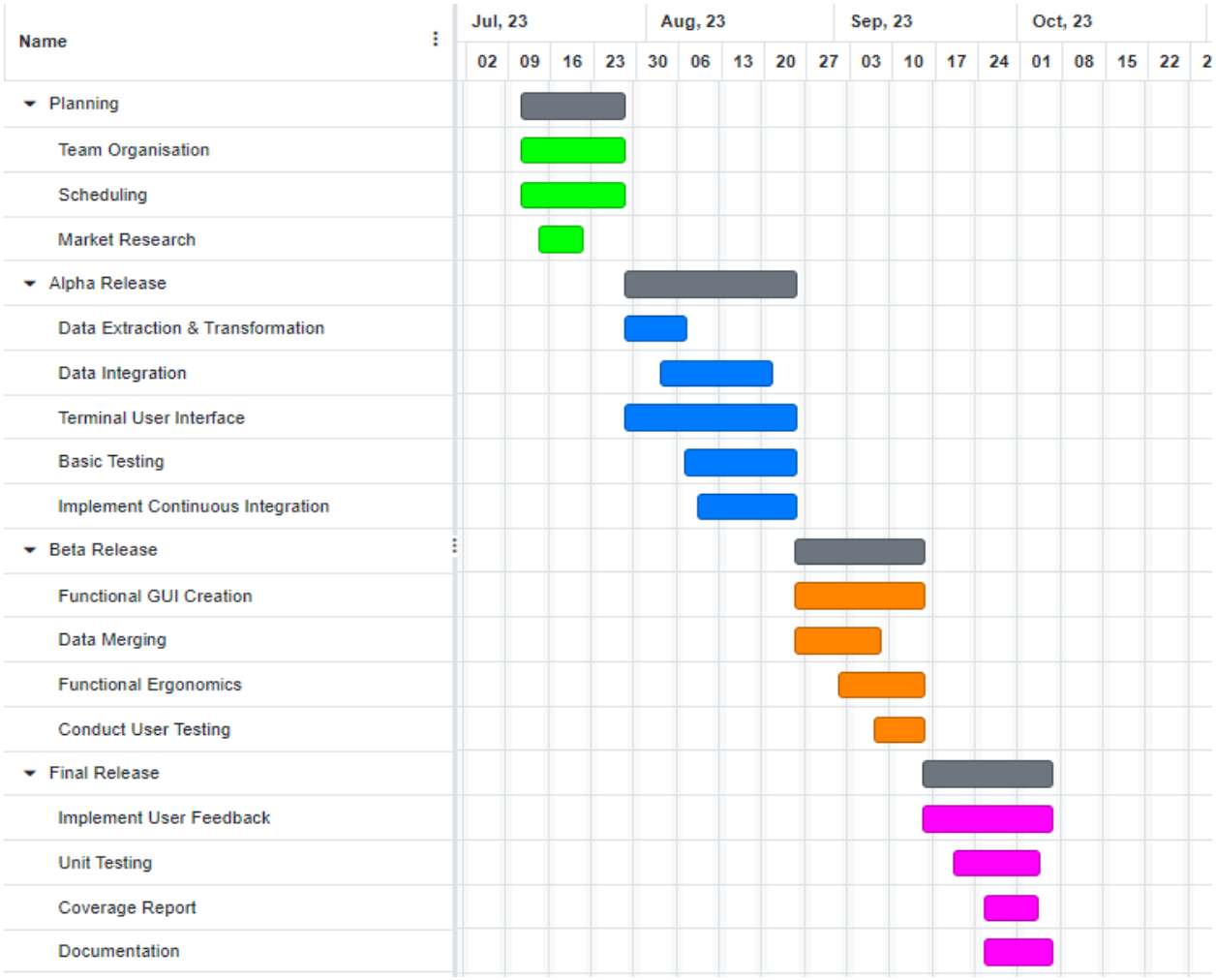
We will also establish weekly project deliverables that outline our main focus for that period. We will implement the use of shorter time frames by dividing the development process into smaller, more manageable chunks. These shorter time frames will enable us to consistently deliver small working aspects of the app's full functionality. This approach will ensure that we maintain a steady workflow in our app development process while still enabling a high degree of flexibility.

Risk Analysis:

Potential Risk	Effects to Project	Mitigation Strategies
Natural Disaster/Pandemic	• Change in the project timeline • Challenging communication amongst team • Reduced productivity	Our plan is to maintain regular standups, preferably via video calls, to foster collaboration and address any potential roadblocks. Additionally, we will prioritise the essential features for the minimal viable product, setting aside the desirable elements. This approach ensures that we deliver a fully functioning application with its core features operational for our users.
Individual Team Member Physical/Emotional Problems	• Loss of productivity • Worse product outcome	In our standups, every member will have a safe space to share how they are managing their workload. As we all have diverse schedules, we understand the need for others to step up and contribute more during certain weeks.
Programming in C/C++	• Slower implementation • Prone to more bugs	We have started to refresh of C++ knowledge before the start of assignment 2 and will use online tools to help assist in any difficulties we might encounter throughout the project duration.
Team Member Clash	• Reduced productivity • Poor communication • Reduced teamwork functionality	The regular standups aim to aid collaboration and foster understanding within the team. We plan to utilise constant open communication to reduce conflicts and encourage the sharing of any concerns, allowing them to be addressed before they escalate into significant issues.
Data Loss or Internet Malfunction	• Progress loss • Reduced project quality • Delay release	The progress will be uploaded to a third-party storage regularly, and team members will frequently pull the repository to maintain local backups. Additionally, a backup repository will be kept in case the main one fails.

Project Schedule:

Gantt Chart:



Current Market Products

Current Market	Filter Event Date	Filter Event type	Filter Event Location	Application form	Map Location
— Eventures —	✓	✓	✓	✓	✓
Eventbrite	✓	✓	✓	✓	X

Eventfinda	✓	✓	✓	✓	X
Google Events	✓	✓* can search for event type but limited filter feature	X* can search for location but not an explicit feature	X	✓* Does not show multiple events, only once the event is clicked
Facebook Events	✓	X	✓	X* Within the FaceBook App	X
Newzealand.com	X	✓	✓	X	X
DunedinNZ	✓	✓	✓* shows by the venue	X	X
Ticketmaster	✓	✓	X* shows by the venue, but not via regions	✓	X
iTICKET	✓	✓	X	✓	X

Most of the available event management products in New Zealand currently offer filtering by event date, type, and location, including EventBrite, EventFinda, Google Events, Facebook Events, DunedinNZ, TicketMaster, and iTicket. Our application will also provide this functionality, placing it on par with most existing products.

What makes our product unique

Eventures aims to offer users an unparalleled experience in event exploration through the implementation of our innovative map feature. Distinguished from existing market products, our application seamlessly merges map data with event data, so that users can conveniently view events on an interactive map, thereby facilitating event discovery.

Eventures will acquire map data from Land Information NZ, while also sourcing event locations from the Eventfinda Event dataset. These data sets will then be rendered on an interactive map using a suitable graphical library, such as SFML (Simple and Fast Multimedia Library). Through the utilisation of markers or custom graphics, distinct event types will be visually represented on the map. Moreover, we will incorporate various interactive features, including zooming, panning, and the ability to click on event markers to access detailed event information.

Finally, the user is in control, facilitated using our advanced event filters. Our filters will empower users to personalise their event search effectively, enabling explicit separation of event types

with ease. This sets Eventures apart from competitors like Google Events or Facebook Events, providing a unique and tailored user experience.

Fig 2: Illustrates the potential of the visual map feature

Customer Interest:

The demand for applications and platforms that cater to customers' event discovery needs is increasing. According to insights from the andfacts.com market insights platform, there has been a 51% increase in people searching for event data, specifically using terms like "events near me", "local events", and “event finder” in New Zealand over the past five years. These numbers can be further shown by the average of 1000 monthly searches for "events near me" and 2900 monthly searches for "event finder" in 2023.

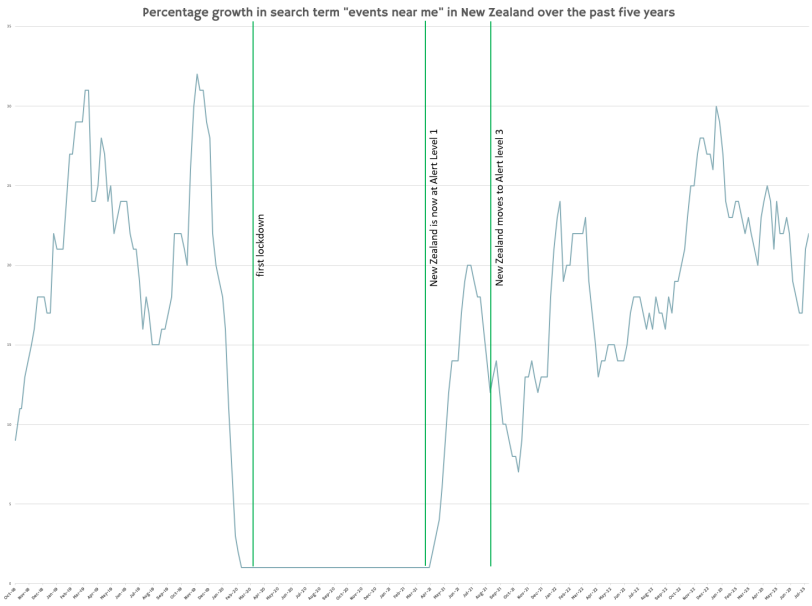


Fig 3: Depicts the percentage growth of users searching for "events near me" over the course of the last five years, with data averaged on a weekly basis. Notably, the graph highlights a remarkable 67% upward trend in such searches during this period. Additionally, disruptions attributed to the COVID-19 pandemic have been labelled to illustrate deviations in the observed data. Figure from https://www.andfacts.com

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Our app aims to capture consumers who are actively searching for events and are interested in exploration, entertainment, and unique experiences. The primary focus will be on urban and suburban areas with a significant student population. The app will appeal to a diverse audience, but will target individuals between the ages of 18 and 26, who are either enrolled in colleges or universities, or have recently graduated. This age group is known for their interest in a wide range of activities and events, such as concerts, parties, sports events, cultural festivals, workshops, networking events, and social gatherings. They are digitally inclined and are comfortable using smartphones. Additionally, students are naturally sociable, seeking opportunities to socialise, make new friends, and expand their network.

Eventures will also cater to budget-conscious students, and young adults, by providing the ability to filter events by types and prices. It will cater to those who seek exciting experiences but are mindful of their spending and often look for affordable or discounted events. The platform will efficiently showcase a diverse range of events happening around them, making it easy for students to discover and explore exciting opportunities.
