Team **Caffeine**

Introduction

Our project, centred around the concept of a Carpool mobile application, was devised with the intention of addressing and mitigating the escalating issues of traffic congestion, environmental pollution, and the spiralling costs of transportation in New Zealand. The aim was to craft a user-centric application that optimises carpooling options, enhancing the commuting experience while also contributing positively to the environment and community.

Our Aims

To reduce traffic congestion, reduction in greenhouse gas emissions, aligning with New Zealand's commitment to environmental sustainability.
Provide a cost-effective commuting alternative, enabling users to save on substantial commuting expenses and to foster a sense of community and social interaction among users.

Targeted towards daily commuters, travellers, and essentially anyone seeking a more cost-effective, eco-friendly, and sociable means of transportation.

The project encompassed the design and development of a carpooling application, taking into consideration usability, security, location services, and user engagement.

Results & Evaluation

Sign up

To ensure simplicity and a frictionless signup process, our frontend team has fostered a clean and user-friendly feel through providing information only when it is needed.

Revenue

For our revenue model, we have adopted a small % transaction fee on payments concept when designing our automatic pricing calculator. This low percentage enables users to maintain affordable pricing whilst also offering relief to our drivers.

Google Map & CarJam

Our integration with Google Maps and CarJam has enhanced the user experience by providing location information during journey planning and the ride itself.

Important Outcomes

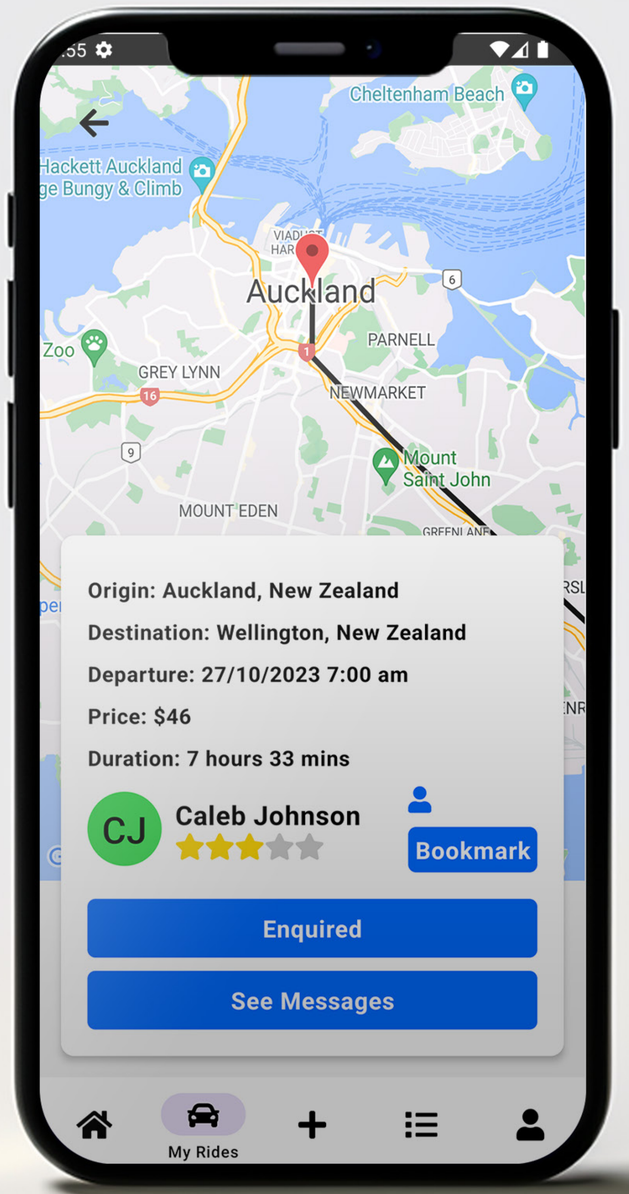
The outcome of our project is a robust and user-friendly carpooling application that not only provides an efficient and viable alternative to conventional commuting methods but also promotes sustainability and community engagement.

To create an app for people in New Zealand that enables them to carpool on short or long trips.

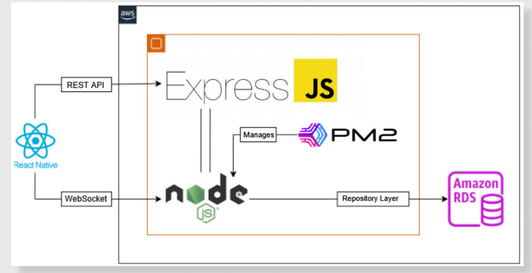
- Model the European app *"BlaBlaCar"*
- Keep the app simple
- Use a non-intrusive revenue model
- Allow users to sign up as a passenger or driver
- Make signup as frictionless as possible
- Map view to see the location of users

In addition to fulfilling our **primary goal**, we have made substantial progress in addressing the **secondary goals**, contributing to the overall depth and effectiveness of Trippr.

Tripper



System architecture diagram



Technologies used

Components

Frontend	React Native
Backend	Node.js, Express
Essential Tools	PostgreSQL, Postman, AWS, PM2

Conclusion

Throughout this project, we successfully devised a solution to alleviate traffic congestion, reduce greenhouse gas emissions, establish a cost-effective transportation system, and laid the groundwork for fostering a strong and unified community.

The environmentally-conscious transportation solution to meet the diverse needs of individuals all around New Zealand.

Diverse User Preferences:
User preferences vary significantly, particularly in an app catering to a broad audience.

Technical Expertise:
Developing an app of this calibre demands comprehensive knowledge across multiple domains, including GPS integration, real-time mapping, payment processing, and scalability planning.

Feedback Integration:
Enabling user feedback through peer review is essential for fostering trust and improving the app.

Data Privacy and Security:
Early insights emphasised the critical importance of data privacy and security for our app.

Operational Efficiency:
Streamlining the operational aspects of the app, including ride searching, route optimisation, and messaging channels, is essential to provide a seamless carpooling experience.

Our major achievements encompassed the realisation of excellence through the **EEE principle (Economic, Efficient, Eco-friendly).** This accomplishment significantly bolstered the app's cohesion, thereby amplifying the benefits provided to each user.

Additionally, the integration of advanced live data APIs such as ***CarJam*** and real-time location data from the ***Google API*** proved to be a substantial game changer for our project, greatly elevating the overall user experience.

Future Work

What lies ahead for Trippr

Environmental Stats
By leveraging our implementation of the Carjam API, we could develop a feature that calculates and displays the environmental impact of each user's carpooling activities.

Payment options
Another feature we look forward to implementing would be a more streamlined payment method such as stripe and/or cryptocurrency.

Group Interactivity
By increasing user-to-user engagement through features that enhance group interactivity, we could deepen the relationships between ride participants before a ride even begins.
(Spotify integration and a group chat feature within the app)

*Step into the future with **Trippr**, where saving **money** and the **planet** unite through **unforgettable journeys!***

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