

Track Your Commute

Background

New Zealand's population has reached 5 million in 2020¹. As the population of our major cities continue to increase, so has the volume of vehicles traveling on roads. Roads become congested as commuters travel at the same time².

Problem

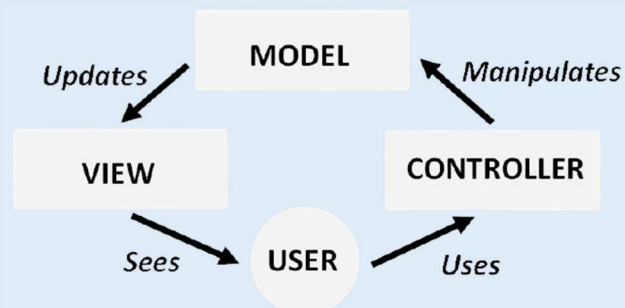
Encouraging commuters to shift their way of travel will have greater impact in reducing congestion. Currently, there is no suitable technological tool to understand the way people commute. To change the way people commute we must first understand their behaviour.

Aim

Provide an automated application to collect and aggregate data about commuter journeys using the GPS on smartphone devices. This will remove the need of user input, allowing for ease of use.

Method

The application was designed with three key ideas: scalability, code reusability and updatability. To achieve this, the app follows the Model-View-Controller architecture³.



Result

After installing the app

1. Accept the permissions
2. Add your addresses
3. Set your schedule
4. Let the app do the rest!

Uploads to the server can be done passively or at the discretion of the user.



View the app!

Conclusion

Overall, the app provides a robust way to track commutes and aggregate data. It can be used by individuals wanting to track the way they commute. It can also be used by organisations supporting congestion and carbon reduction initiatives or regional and transport planners as the data collected can be analysed to understand commuter behaviour.

References

- [1] Stats NZ. New Zealand's population nears 5.1 million. <https://stats.govt.nz/news/new-zealands-population-nears-5-1-million> (accessed 25 January).
- [2] Ministry of Transport. The congestion question. Technical report. Ministry of Transport 2020.
- [3] Deacon, J. Model-View-Controller (MVC) Architecture. Computer System Development, 1-6. 2009.

Poster by Rhane Mercado

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