Mapping suburban bicycle lanes using streetscape images and deep learning

A minor thesis submitted in partial fulfilment of the requirements for the degree of Masters of Data Science

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Declaration

This thesis contains work that has not been submitted previously, in whole or in part, for any other academic award and is solely my original research, except where acknowledged.

This work has been carried out since March 2021, under the supervision of Dhirendra Singh.

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Summary

A non-technical summary for public dissemination, up to 200 words

TODO: technical and non-technical summaries of research

Abstract

Up to 200 words

TODO: technical and non-technical summaries of research

Contents

List of Figures

List of Tables

Chapter 1

Introduction

[TODO: clear research questions/aims/hypotheses] ⇐

[TODO: background knowledge] ⇐

The benefits of "active transport", such as walking and cycling, have been well documented in previous studies. Participants' health may improve due to their increased physical activity. There are environmental benefits due to reduced emissions and pollution. And there are economic benefits, including a reduced burden on the health system, and reduced transportation costs for participants [1] [2].

Chapter 2

Literature Review

⇐ *[TODO: literature review places research in context]*

⇐ *[TODO: background knowledge]*

2.1 A Section

Chapter 3

Methods

[TODO: clear and accurate description of methods] ⇐

[TODO: sufficient detail to allow reproduction of results] ⇐

[TODO: awareness and critical evaluation of alternatives] ⇐

3.1 Another Section

Chapter 4

Results and Discussion

⇐ *[TODO: clear and complete presentation of results]*

⇐ *[TODO: sufficient quantity of work]*

⇐ *[TODO: appropriate intellectual level]*

⇐ *[TODO: appropriate consideration of evidence in discussion]*

⇐ *[TODO: uncertainty/error analysis]*

4.1 Yet Another Section

Chapter 5

Conclusion

[TODO: conclusions are supported by the observations/results/calculations] ⇐

[TODO: conclusions relate to the original research questions/aims/hypotheses] ⇐

Appendix A

Testbed Configuration

Bibliography

[1] I.-M. Lee, E. J. Shiroma, F. Lobelo, P. Puska, S. N. Blair, and P. T. Katzmarzyk, "Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy," *The Lancet*, vol. 380, no. 9838, pp. 219–229, 2012. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S0140673612610319

[2] A. Rabl and A. de Nazelle, "Benefits of shift from car to active transport," *Transport Policy*, vol. 19, no. 1, pp. 121–131, 2012. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S0967070X11001119