
SIMPLE SIMULATIONS OF RIDEHAIL TRAFFIC AND TRIPS

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ABSTRACT

Simple simulations of ridehailing traffic and trips in a city are presented, with the goal of informing policy choices and discussions in the contentious but data-poor topic of ridehailing. In the simplest simulation, a city is composed of a square grid of uniform blocks, ridehail vehicles travel randomly around the streets until assigned to a trip, and trips start and end at random locations. Extensions describe equilibration of supply under price changes, and the impact of inhomogeneous demand. Despite the many approximations employed, the simulations allow the relationships between quantities of interest to city planners and others to be explored: vehicle utilization rates, vehicle “idle” time, passenger wait time, and trip demand.

Contents

Professional product manager by day, amateur writer and data analyst by night.

1 Self promotion

- [Resume](#)
- [Publications and media](#)

2 Location

I live in Kitchener-Waterloo, Ontario, which is also home to *Thomas Slee Drive* and *Thomas Slee Park*. Sadly, the names are just a very unlikely coincidence.

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Map(center=[43.37456, -80.43575], controls=(ZoomControl(options=['position', 'zoom_in_text', 'zoom_in_t
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3 Contact

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Introduction

Discussion about how Uber and other Platform Transit Companies (PTCs) should fit into the city transit landscape is vigorous but often hampered by lack of reliable data.

Some individual researchers have been granted privileged access to company data, have been commissioned to carry out research, or have been compensated for their work. Research carried out under these conditions is not replicable and is fraught with conflicts of interest.

Some cities have negotiated or required access to ridehail data from PTCs, but that data is not always accessible to the broader public. In those few cases where cities do make data public, most prominently Chicago [[@cityofchicago2022](#)] and New York City [[@newyorkcityopendata2022](#)], key elements are missing, such as the time that drivers spend on the platform but without a trip.

This paper attempts to compensate for the lack of reliable data. It presents a set of simple computer simulations of ridehail traffic and trips in a city, which can be calibrated against broad aggregate data that is more widely available