The Battle of Neighborhoods
The Electric Vehicle City

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Abstract

The report is the study of the strategic locations of electric charging stations for the use of Electric vehicle charging around the city state of Singapore. Using the location data provided by Foursquare, an analysis of the city of Oslo, Norway and Singapore is done in comparison to identify ideal locations where such charging stations should be located.

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1 Introduction

1.1 Background

Climate change is no longer an issue that can be ignored. The effects of Greenhouse emissions as a byproduct of modernization is known to be the main source of the problem. The Paris Agreement, *Accord de Paris*, has been the world's greatest and concerted effort to deal with greenhouse-gas-emissions mitigation, adaptation, and finance.

The agreement within the United Nations Framework Convention on Climate Change (UNFCCC) was signed in 2016. It is a long-term goal to keep the increase in global average temperature to well below 2°C above pre-industrial levels; and to limit the increase to 1.5°C, since this would substantially reduce the risks and effects of climate change.

The reduction of greenhouse emissions is a problem which requires a fundamental shift in the way we live our lives as such detailed analysis using the abundant volume of data analysis is required to target areas of industry or lifestyle that can be changed in order to make significant impact.

The reduction of carbon emissions from petrol vehicles has been a common place to start by many countries. The potential of its reduction in major cities all around the world can be achieved by improving transportation systems and the vehicles themselves. The shift from the use of conventional cars with internal combustion engines to hybrid vehicles to electric vehicles (EV) has already begun. Norway is one of the top countries who are adopting electric vehicles as such the capital city of Oslo is chosen as an example of a model city for the adoption of electric vehicles.

With many companies causing this disruption in the vehicle industry, major players in car manufacturing have followed suit and thus the infrastructure must meet this shift. As cities aim to shift to EV vehicles to combat climate change, consumers must have access to the facilities to meet these changes. The convenience of petrol stations to pump for gas must now shift to the convenience of charging an EV vehicle.

1.2 Aim

The aim of this project is to use location data provided by Foursquare to determine the best locations for EV charging stations in the city of Singapore. Using location data from Oslo, Norway, analysis can be done to determine if there are determining factors that would make ideal locations. Such analysis will be of great interests to governments, vehicle manufacturers as well as service providers to strategically plan for the coming disruption of transportation trends in different cities.