Capstone Project - Portland, Oregon's Bicycle Traffic

Lisa Myers
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1. Introduction

1.1 Background

Over the last decade, Portland, Oregon's traffic congestion has significantly increased. The average Portland driver is spending around 50 hours in rush-hour; making Portland traffic the 12th worst in the nation.

During this time, the Portland Bicycle Plan for 2030 was adopted unanimously by Portland's City Council on February 11, 2010; which calls for more than a quarter of all trips to be made by bicycling by 2030. The plan's core elements are to make bicycling more convenient, comfortable, and accessible to more people throughout Portland.

The physical proximity of the bicycle routes, shopping venues, parking areas and affordable housing are important factors in the successful implementation of this plan. In order for commuters to choose cycling over driving, the shopping venues need to be grouped together, routes to affordable housing needs to be short and parking needs to be close to venues.

Therefore, it is advantageous for Portland to understand how currently placed bicycle routes, parking, stores, and affordable housing affect cyclist ridership. Conversely, this information can be used to target future locations of new routes, appropriate new venues, affordable housing, and new bicycle parking strategies.

1.2 Problem

In this project I will try to determine if Portland, Oregon's neighborhoods can increase bicycle ridership.

This can be done by looking at the:

- number of existing bicycle routes,
- number of existing bicycle parking areas,
- number of and distance to existing venues (which are appropriate for bicycle commuters), if any
- median house sale price for each Portland neighborhood

1.3 Interest

Not only would the Portland's City Council be interested in understanding cyclist commuting needs, the Department of Transportation and other bicycle services (ex. Nike's Biketown) could better understand their impact in Portland. Accurate location of bicycle infrastructure would provide better budgeting, help resolve traffic congestion problems, reduce vehicle emissions, and ultimately increase the livability of Portland Oregon.