Determining Livability in Portland Oregon

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1. Introduction

1.1 Background

The city of Portland Oregon is the 25th most populated city in the United States and is consistently ranked as one of the fastest growing. The City of Portland's 2035 Comprehensive Plan is quoted as saying the following about growth forecasts:

> *Portland's economy, neighborhoods, resources, natural setting and the lifestyle options they support continue to attract new residents to the city. Between 2010 and 2035, Portland is projected to add approximately 260,000 new residents (123,000 households) to the roughly 620,000 people who live here today. About 140,000 new jobs are projected over the same period, adding to the 370,000 existing jobs (2010).*

It is predicted that most (77%) of the new development is to take place in existing neighborhoods.[1] For people migrating to Portland and those wanting to transition elsewhere in the city, determining where to live is a major decision.

1.2 Problem

With nearly a hundred neighborhoods in the Portland metro area it can be a daunting exercise to narrow down a search area, let alone find the best neighborhood. This report will use three popular livability metrics to rank each neighborhood: school ratings, crime rates and walkability. The rankings for each neighborhood will then be grouped into one of seven established neighborhood coalitions. Grouping neighborhoods by coalition should provide a more accurate representation of livability in a general area based on the metrics selected.

1.3 Interest

The primary target audience for this report are people moving into Portland for the first time and those existing residents looking to change neighborhoods.

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[1] Bureau of Planning and Sustainability, City of Portland, *Comprehensive Plan Update Growth Scenarios Report,* July 2015

2. Data Description

2.1 Data Sources

The neighborhood boundary information for this project will be provided by the PortlandMaps Open Data project https://gis-pdx.opendata.arcgis.com/. Data for both Neighborhood Regions and Neighborhood Coalitions is provided in GeoJSON format. As of this writing the raw data consists of 98 Neighborhood Regions and 13 Neighborhood Coalitions.

The Portland Police Bureau provides offense statistics on a monthly basis https://www.portlandoregon.gov/police/71978. This data includes the neighborhood where the offense took place and information about the type of offense. The offense data for this report will consist of data for calendar year 2018. Offense data will be grouped by neighborhood to determine the total number of offenses by neighborhood in 2018. The offense data will not be sorted or weighted by type of offense.

Walkability will be based on Foursquare data obtained from the centroid of each neighborhood region. The walkability distance will be based on a generally accepted distance of a quarter of a mile (apprx 400 meters) used for planning pedestrian related infrastructure. Due to limits with the Foursquare Developer account used for this project, the limit for requested venues will be 50 per neighborhood. The venue categories will be limited to Arts & Entertainment, Food, Nightlife Spot, Outdoors & Recreation and Shop & Service. These categories may be narrowed down further after preliminary results are obtained.

The Oregon Department of Education (ODE) provides data used for an Accountability Details Report for each school by district https://www.ode.state.or.us/data/reportcard/Media.aspx. The Accountability Details Report displays the data for indicators used by the accountability system to identify schools for comprehensive or targeted supports as required by Oregon's State Plan under the Every Student Succeeds Act (ESSA). This livability report will use Portland school district data from the 2017 - 2018 school year to develop a rating system for each school in the district.

2.2 Data Cleaning
TBD