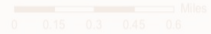


Average Annual Weekday Traffic



Annual Daily Traffic from WSDOT
Scaled the same as purple lines



Neighborhood Traffic Flow

Technology Review

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Project Description

- When moving to a new city/neighborhood, it is difficult to know the flow of traffic in the area
 - Sites such as Zillow, Craigslist, etc., do not provide information about whether property is located near a busy street
- This information may help movers make a decision on whether or not to buy a house in a particular location
- **We will create an interactive mapping tool that provides users with information about vehicle and foot traffic for neighborhoods in Seattle**
 - Users will be able to filter by neighborhood to discover foot and vehicle traffic flow
 - Users will be able to view historical data about vehicle traffic flow

Datasets:

- <https://data-seattlecitygis.opendata.arcgis.com/datasets/seattle-streets>
- <https://data-seattlecitygis.opendata.arcgis.com/datasets/2018-traffic-flow-counts>
- <https://data.opendatasoft.com/explore/dataset/zillow-neighborhoods%40public/map/?refine.city=Seattle&location=10,47.6094,-122.33963&basemap=jawg.sunny>

Use Case 1

A user wants to view the vehicle traffic flow in a specific neighborhood

User: Select the neighborhood from drop-down menu

APP: Show all types of traffic flow in that neighborhood (e.g. bike, vehicle, foot)

User: Click the checkbox for only vehicle traffic flow

APP: Filter by vehicle traffic flow only

User: Zoom in to see the blocks or street the user cares about

APP: Show the traffic flow by width and/or color to indicate busy streets and blocks

Use Case 2

A user wants to view the annual average weekday traffic flow in a neighborhood

User: Select the neighborhood from drop-down menu

APP: Show all types of traffic flow in that neighborhood (e.g. bike, vehicle, foot)

User: Use slider on the top corner to choose a specific year

APP: Show the traffic flow for a specific year on map

User: Click the checkbox for Monday to Friday

APP: Show only the weekday traffic flow

User: Choose “view report” from the menu

APP: Show statistics for annual average weekday traffic flow by different years

Python Libraries

- Bokeh (<https://docs.bokeh.org/en/latest/>): Interactive visualizations
- Plotly (<https://plot.ly/python/>): Interactive visualizations
- Dash (<https://plot.ly/dash/>): Analytical web apps



plotly | Dash

Technology Comparison

Bokeh

- Pros
 - Lots of chart types, including maps
 - Good documentation, lots of examples
 - Can be used in dashboards (via Bokeh server), in websites (embed in html file), or in Jupyter notebooks
 - **More interactions than Plotly**
- Cons
 - Steeper learning curve than Plotly
 - Some interactions require JavaScript
 - Less integrated with Pandas than Plotly
 - Can be slowed down with large datasets

Plotly

- Pros
 - Over 40 chart types, including maps
 - Good documentation, lots of examples
 - Can be used in dashboards (via Dash), in websites (save as html file), or in Jupyter notebooks
 - Lots of out-of-the-box features
 - **Easier to learn than Bokeh**
- Cons
 - Can be slow with large datasets
 - Limited number of color palettes