Apartment Finder

Balancing Commute Time with Rent

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Data Engineering - Metis
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Use Case

- Got a new job? Considering moving closer to work?
- How do you determine if a cheaper apartment further from work is worth the time in commuting? With the web app featured in this presentation!

https://share.streamlit.io/sdblass/streamlit/main/apartments_streamlit_isochrone.py

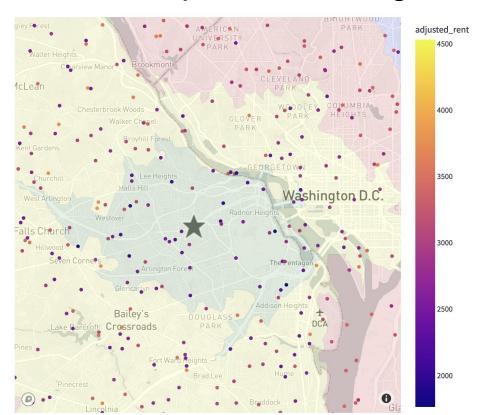
Enter user data

Enter your workplace location in the fields below.



Enter your hourly wage (\$ per hour) This will let us determine how much your time spent commuting is worth to you. The more time you spend commuting, the higher your effective rent will be. Hourly wage How will you get to work? Drive Bike ○ Walk Select your desired range of rents The search will increase the rent based on the time required to commute to your set job location. Range of rents 3500 1400 4000 Select the types of apartments to search for. Studio × One bedroom × Two bedrooms X @ T

Visualize apartment listings



| Commute times (minutes) | | | | | |
|-------------------------|--|--|--|--|--|
| <10 | | | | | |
| 10-20 | | | | | |
| 20-30 | | | | | |
| 30-40 | | | | | |
| >40 | | | | | |

Visualize apartment listings

The three cheapest apartments for each commute length

| rent | effective rent | lat | long | random_real | type | commute time (minutes) |
|------|----------------|---------|----------|-------------|--------|------------------------|
| 1501 | 1767 | 38.8630 | -77.0581 | random | studio | <10 |
| 1516 | 1782 | 38.8823 | -77.0633 | random | studio | <10 |
| 1563 | 1829 | 38.9032 | -77.0811 | random | studio | <10 |
| 1513 | 2046 | 38.8047 | -77.1625 | random | studio | 10-20 |
| 1525 | 2058 | 38.8971 | -77.0515 | real | studio | 10-20 |
| 1561 | 2094 | 38.9094 | -77.0655 | random | studio | 10-20 |
| 1503 | 2303 | 38.9637 | -77.3555 | random | studio | 20-30 |
| 1510 | 2310 | 38.7211 | -77.0655 | random | studio | 20-30 |
| 1518 | 2318 | 38.7985 | -77.2976 | random | studio | 20-30 |
| 1500 | 2566 | 38.7628 | -77.3228 | random | studio | 30-40 |
| 1500 | 2566 | 39.0500 | -77.4171 | random | studio | 30-40 |
| 1502 | 2568 | 38.6860 | -77.2444 | random | studio | 30-40 |
| 1502 | 2835 | 39.0925 | -77.0659 | random | studio | >40 |
| 1505 | 2838 | 39.0628 | -77.4251 | random | studio | >40 |
| 1507 | 2840 | 38.6015 | -77.3342 | random | studio | >40 |

Future work

 Scrape data from a real estate listings site such as <u>apartments.com</u>. You will see addresses in the table above instead of latitude and longitude.

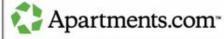
Pipeline

User Input

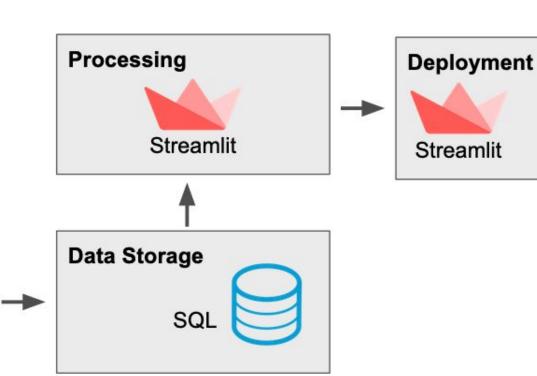
- Workplace address
- Hourly earnings
- Transportation mode



Data Ingestion



*Currently using mostly artificial listings



Streamlit

Github