Housing Market Sales Dashboard

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Background

Motivation

- Housing prices have seen unprecedented y-o-y increases
- Homebuyers need real-time data to understand market tends
- Redfin is one of the most widely used website by homebuyers
- While data is available, there is no aggregate view

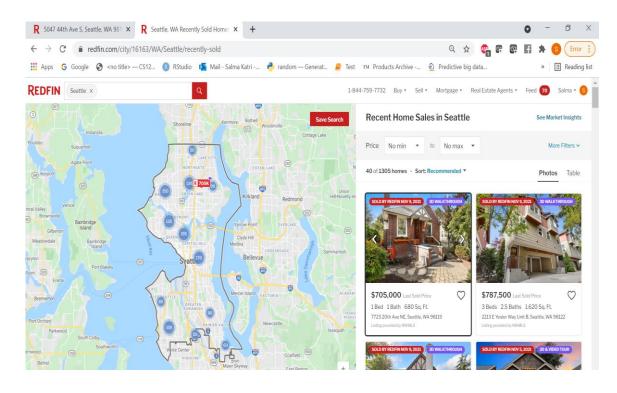
Objective

 Build interactive dashboards to display up-to-date housing market trends, key statistics and graphs

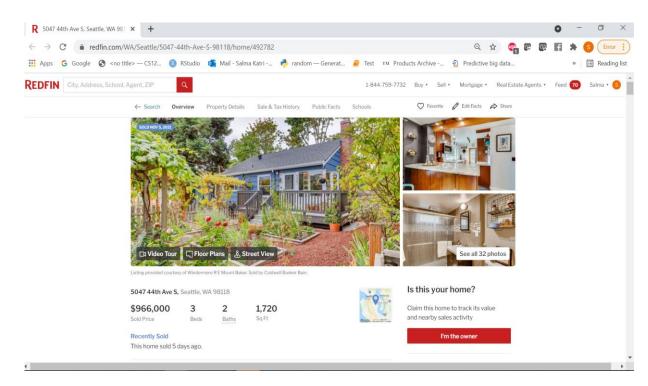


Data Ingestion

Recently Sold Main Page



Individual House Listing



Scraping pipeline designed to download sold homes data from Redfin, then scrape additional home specific information from house listing link

Pipeline Design

Data Ingestion

Build scraping pipeline in
Python to collect Redfin sold
houses data

Testing/Robustness

- •Use schedule to scrape new Redfin data month
- Add tests to check newly ingested data for errors



Data Storage

Organize scraped data into tables format and load into SQL



Processing

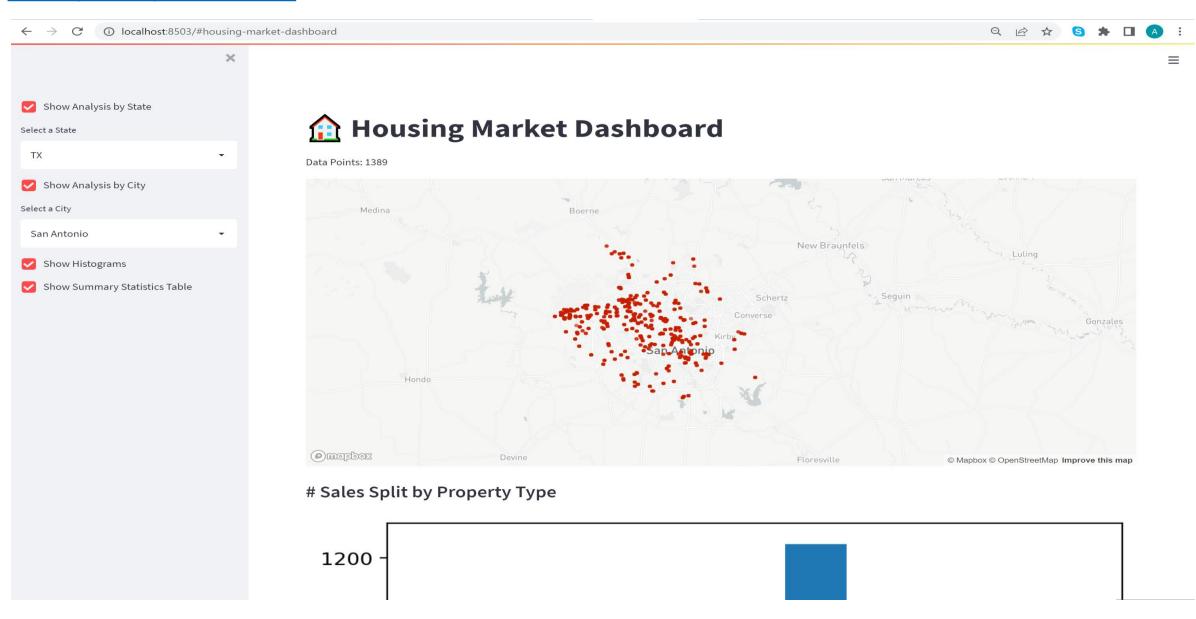
Clean data in Python, aggregate and calculate statistics using NumPy and Pandas and download processed data as csv



Deployment

Visualize the data using
Matplotlib in Streamlit to
create an interactive
dashboard showing useful
trends and summary
statistics. Deploy with Github.

Deployment



Future Work

- Add individual houses scraped data to get more features
- Create more visualizations and improve formatting
- Add more time range to show trends
- Automate pipeline to make monthly updates
- Check for errors in data and handle