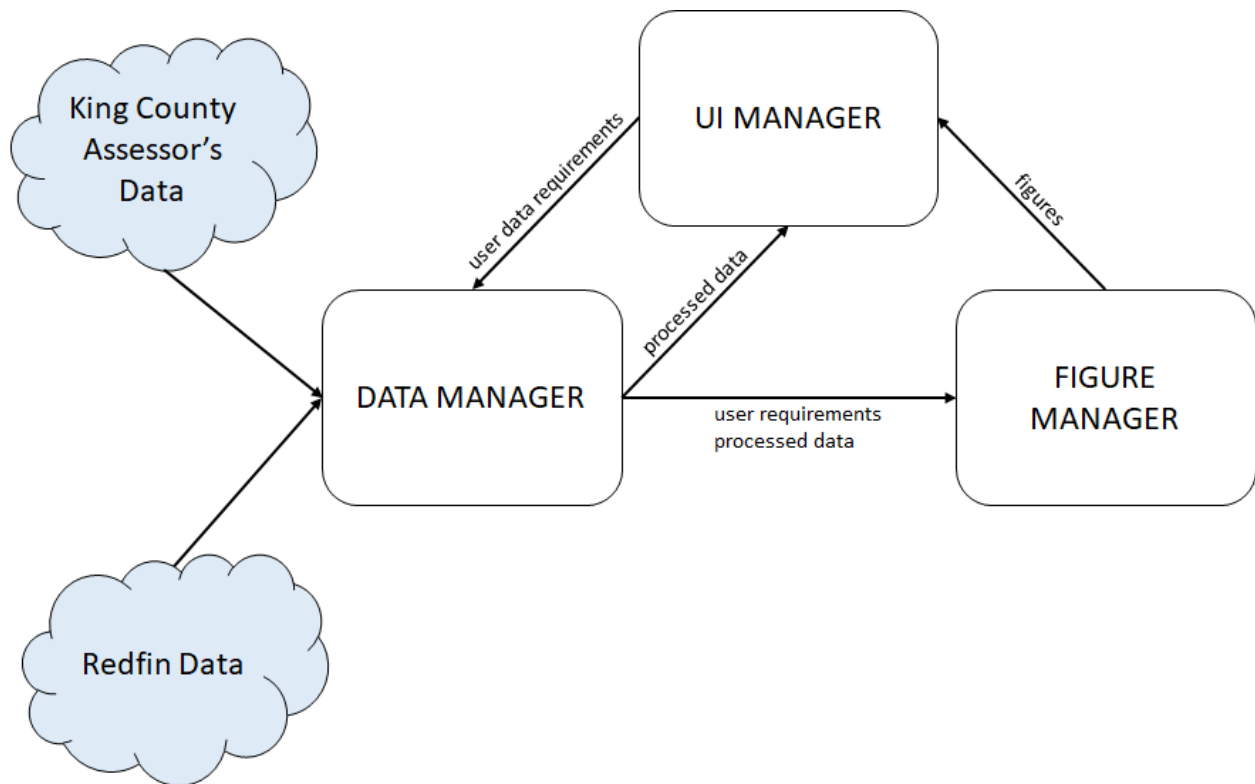


Component Specification

Functional diagram



Software components

UI Manager

Interfaces between user and the tool

- Input: Data and metadata from data manager, current state of interactive components from browser, graphical figures from figure manager
- Output: Current state to figure manager, HTML components to browser

Data Manager

Pulls raw data from the sources and performs initial processing

- Input: Data from King County Assessor data and Redfin
- Output: Parsed, filtered and reformatted csv files and Pandas DataFrames to dashboard and figure managers

Figure Manager

Creates graphical figures and other human-readable output

- What it does: Create graphical figures of trends and results
- Input: Data from data manager, current state from dashboard manager
- Output: Graphical figures to dashboard manager

Interactions

- User interacts with the interface to define the scope of their query (selects geographical area, time parameters, etc)
- UI Manager converts the user scope into query parameters and sends them to the Data Manager
- Data Manager takes query parameters and pulls the needed data from the sources. Data is then processed, packaged, and delivered to the UI Manager and/or Figure Manager
- Figure Manager receives the data and requirements and generates the required figures which are then sent to the UI Manager

Outline development plan

- Select key technologies and packages to begin development
- Initialize package structure in repository, including CI and tests
- Create functions to pre-process raw data
- Create dashboard template, including HTML components for maps, charts, and interactive components
- Create functions to create graphical figures
- Create callback functions to update graphical figures