# Hiking trails & Weather App

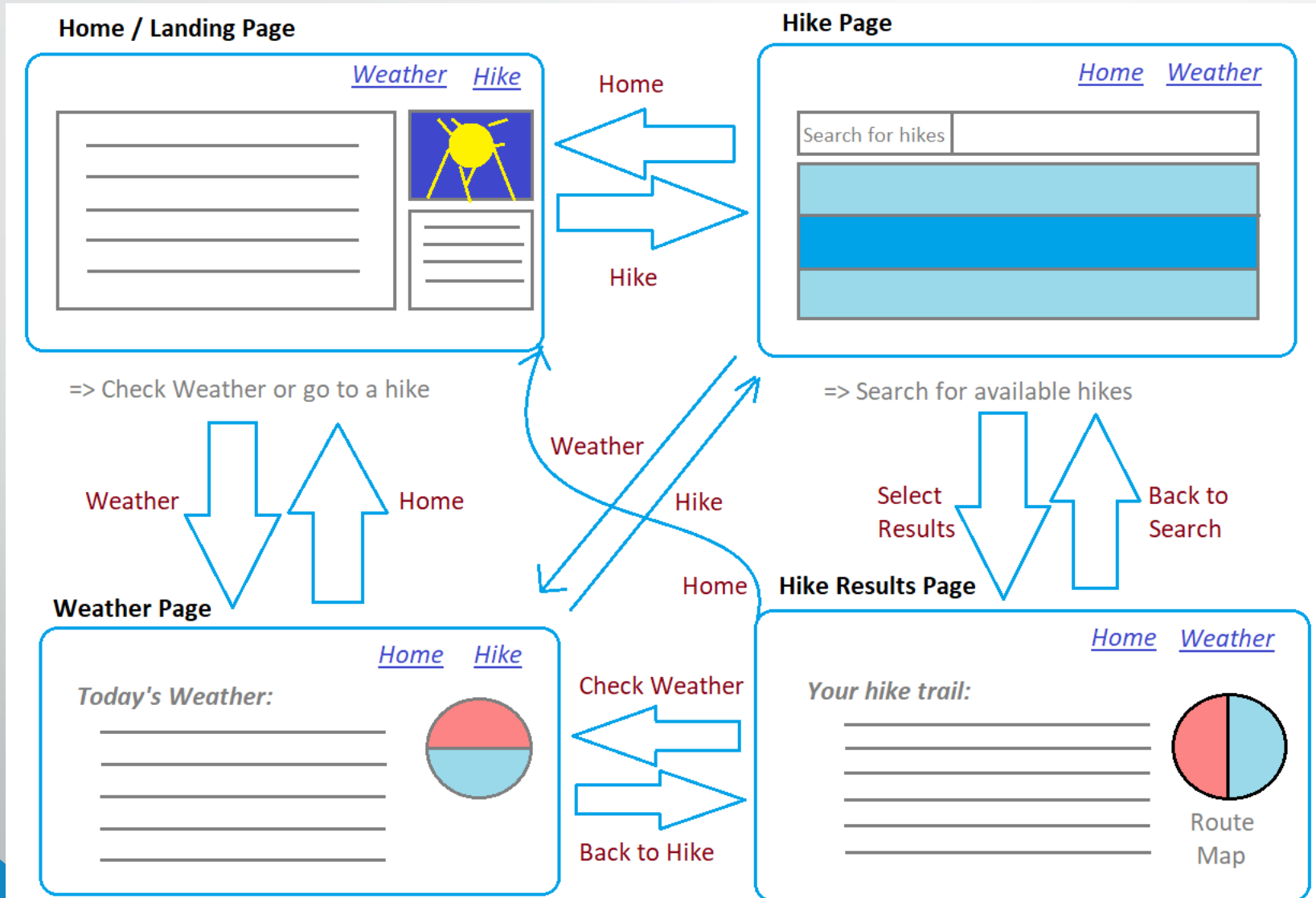- Shweta Korulkar
- Harsha Ramayanam

# App Details

- Weather and hike trails web application

- Check weather, check for hikes. All information can be navigable.

- Find a map route to hike trail.

# App Features

- Home page with links

- Link to weather page, link to hike trails page

- Links to jump from one page to other page

- Search box to search weather of particular place(s)

- Search box to search for hike trails

- Etc.

# Web Flow

# Frameworks/Libraries

- React Framework

- FetchAPI library and possibly other API libraries,

- Stack:
  - ✓ FRONT END → HTML5, CSS3, JAVASCRIPT, ReactJS
  - ✓ BACK END → ExpressJS, Node.js, REST API's

# API's

Our choices of API's
- ✓ Weather APIs
- ✓ Hike Trail APIs
- ✓ Map APIs

# WEATHER API's

- Weather API:

  - 1) WeatherAPI.com

    - **Limit**:  1000000 / month quotaHard Limit

    - **Data Format**: FetchAPI

    - **Type**: Free public API accessible via authentication key

    - **Information** : Access to Search API, Sports API, Last 7 Days History, Hourly Weather, 3 Day Forecast, Realtime Weather, Astronomy API,Time Zone API features.

    - **Popularity**: 9.8/10, **Latency**: 101ms, **Service Level**: 100%

# WEATHER API's

- Weather API:

  - 2) ClimaCell

    - **Limit**:  100 / day quota Hard Limit

    - **Data Format**: FetchAPI

    - **Type**: Free public API accessible via authentication key

    - **Information** : Access to  Short Term Forecast (Nowcast), Hourly Forecast and Realtime features.

    - **Popularity**: 9.6/10, **Latency**: 493ms, **Service Level**: 100%

# WEATHER API's

- Weather API:

  - 3) OpenWeatherMap

    - **Limit**: 500 / month quota Hard Limit

    - **Data Format**: FetchAPI

    - **Type**: Free public API accessible via authentication key

    - **Information** : Access to search Weather API, Historical Weather Data (5 Days), 5 days/3 hour forecast API, Current Weather API features.

    - **Popularity**: 9.9/10, **Latency**: 100ms, **Service Level**: 98%

# HIKE TRAIL API's

- Hike trail API:
  - 1) TrailAPI
    - **Data Format**: FetchAPI
    - **Type**: Free public API accessible via authentication key
    - **Information** : Information and photos for tens of thousands of outdoor recreation locations including hiking and mountain biking trails, campgrounds, ski resorts, ATV trails, and more.
    - **Popularity**: 9.3/10, **Latency**: 840ms **, Service Level**: 100%

# HIKE TRAIL API's

- Hike trail API:

  - 2) Hiking Trails (from data.ny.gov)

    - **Access Data**: https://gisservices.dec.ny.gov/gis/dil/

    - **Type**: Free public access dataset

    - **Information** : This data shows the location of transportation corridors on Department of Environmental Conservation state lands that are approved for foot travel.

# MAP API's

- Map API:

  - 1) MapTiles API

    - **Data Format**: FetchAPI

    - **Type**: Free public API accessible via authentication key

    - **Information** : Use our Map Tiles with English, French or Spanish labels based on OpenStreetMap data for your online map or your app map or your desktop software application like QGIS et al.

    - **Popularity**: 9.6/10, **Latency**: 171ms, **Service Level**: 100%

# MAP API's

- Map API:

  - 2) Google Maps Geocoding API

    - **Data Format**: FetchAPI

    - **Type**: Free public API accessible via authentication key

    - **Information** : Geocoding is the process of converting addresses (like "1600 Amphitheatre Parkway, Mountain View, CA") into geographic coordinates (like latitude 37.423021 and longitude -122.083739), which you can use to place markers on a map, or position the map.

    - **Popularity**: 9.5/10, **Latency**: 132ms, **Service Level**: 100%

# MAP API's

- Map API:

  - 3) WeatherAPI.com

    - **Limit**:  1000000 / month quotaHard Limit

    - **Data Format**: FetchAPI

    - **Type**: Free public API accessible via authentication key

    - **Information** : WeatherAPI.com is a powerful fully managed free weather and geolocation API provider that provides extensive APIs that range from the weather forecast, historical weather, IP lookup, and astronomy through to sports, time zone, and geolocation.

    - **Popularity**: 9.8/10, **Latency**: 106ms, **Service Level**: 100%