

# Team Atmosphere

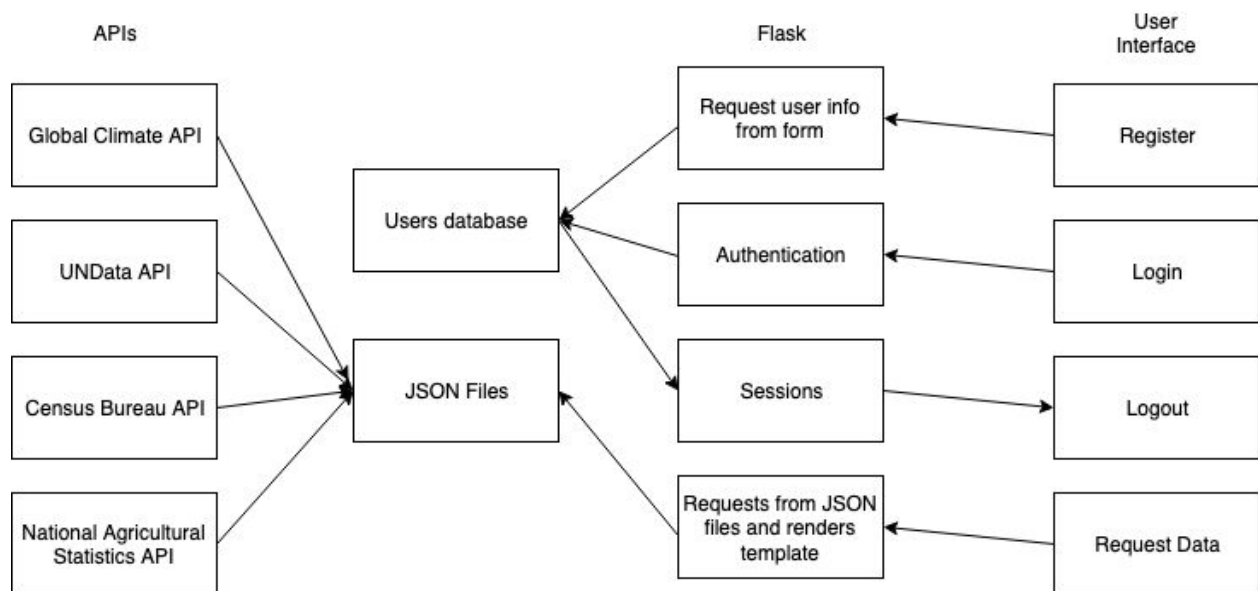
Alice Ni, Moody Rahman, Joseph Yusuf, David Wang

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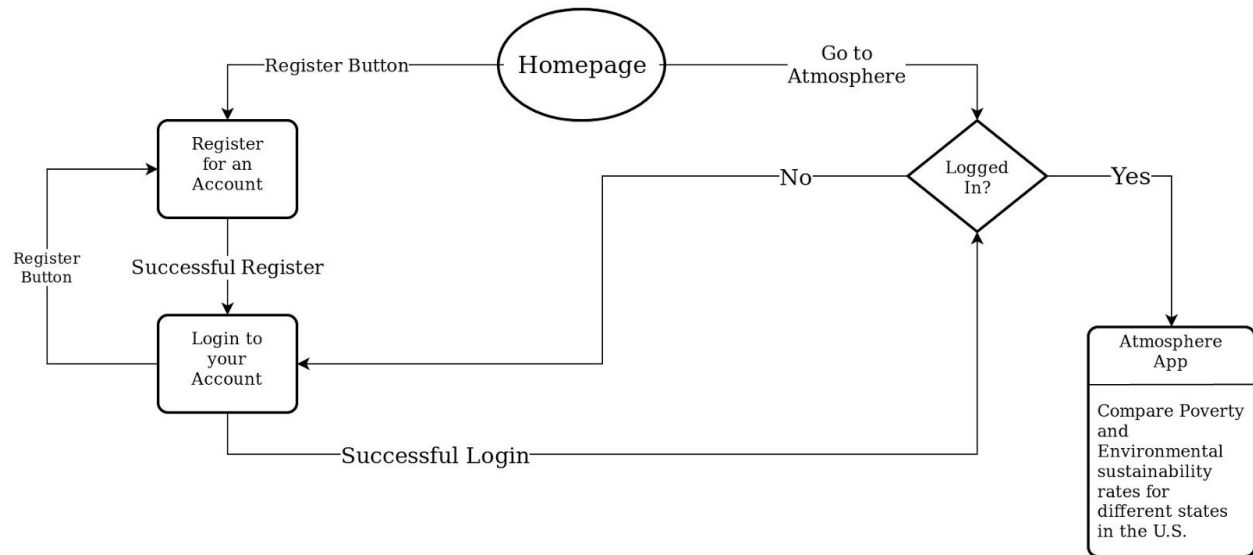
## Functionality

- Interactive website that allows users to compare data from different states
- A few built-in data variables, stored as JSON files in a JSON file folder
  - Population per state
  - Poverty rates
  - Carbon emissions
  - Crop yield
- Users can choose the variables and the states they want to compare, making a request to a Flask app that reads from the JSON files. If the variables are not in the folder, the app makes a request to the API that has the specified data.
- Scattergrams and charts will be generated by the parameters specified by the user. Displays information in a table numerically as well.
- Sliders on the scattergram allow the user to choose which years they want to see
- Implements bootstrap

## Component Map



## Site Map



## Atmosphere Site Map

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## Database Layout

### Users

user_id INTEGER	username TEXT	password TEXT	date_created DATETIME
1	"jimbob"	"cooljoe23"	2019-11-17 20:41:16
2	"hamlet"	"macbeth"	2019-11-19 13:12:09

user\_id: identifying number for each user, assigned automatically

username: displayed name for each account, entered by the user

password: entered by the user

date\_created: stores when the account was started, assigned automatically

## Front End

- landing.html
  - User must login or register for an account before viewing the site
  - Buttons to register or login
- login.html
  - Form for submitting an existing username or password
- register.html
  - Form for creating an account
- home.html
  - Home page that displays real-time data for the U.S. as a country (total U.S. population, carbon emissions, etc.)
  - Option for user to select and compare two states via a form at the bottom of the page
  - Submit button brings the user to another page that displays all the state-specific data
- statesData.html
  - Page that displays the specified states and data in a table
  - Sliders that allow the user to move around different years
  - Scattergram showing relation between selected data
  - Form that lets the user change between different states/ selected data types

## Back End

- app.py
  - Login system
  - Registration system
  - Routes
    - "/"
      - Renders "landing.html" if user not logged in
      - Renders "home.html" if user logged in
    - "/login"
      - Renders "login.html"
      - Redirect to "/home"
    - "/register"
      - Renders "register.html"
      - Redirect to "/"

- “/home”
  - If user is not logged in, redirect to “/”
  - Renders “home.html”
  - Displays user specific data
- “/states”
  - Renders “statesData.html”
  - Displays user’s recently viewed comparisons
- “/logout”
  - Removes user from Sessions
  - Redirects to “/”

## Important Links:

National Agricultural Statistics API - <https://quickstats.nass.usda.gov/api>

Must request a key ( I tried requesting one but I never got an email, maybe it doesn't work but I hope it does )

Global Climate API --

<https://datahelpdesk.worldbank.org/knowledgebase/articles/902061-climate-data-api>

Working request:

<http://climatedataapi.worldbank.org/climateweb/rest/v1/country/mavg/tas/1980/1999/FRA>

General format:

[http://climatedataapi.worldbank.org/climateweb/rest/v1/country/type/var/start/end/ISO3\[.ext\]](http://climatedataapi.worldbank.org/climateweb/rest/v1/country/type/var/start/end/ISO3[.ext])

UNData API -- <https://unstats.un.org/SDGAPI/swagger/>

<https://unstats.un.org/SDGAPI/v1/sdg/Indicator/Data?indicator=1.1.1&areaCode=1&timePeriod=2017&dimensions=%5B%7Bname%3A%22Age%22%2Cvalues%3A%5B%2215%2B%22%5D%7D%2C%20%7Bname%3A%22Sex%22%2Cvalues%3A%5B%22BOTHSEX%22%5D%7D%5D>

M49 codes: <https://unstats.un.org/unsd/methodology/m49/>

Census Bureau:

[https://api.census.gov/data/2018/acs/acs1?get=NAME,group\(B01001\)&for=us:1&key=07626e3b3578edd0e55ba15cb38770a85aedd31d](https://api.census.gov/data/2018/acs/acs1?get=NAME,group(B01001)&for=us:1&key=07626e3b3578edd0e55ba15cb38770a85aedd31d)

<https://www.census.gov/data/developers/data-sets/acs-1year.html>