Carbon Food-Print

* Concept:
  + Single-page React App
  + Grocery list app that tells the user the carbon footprint of their grocery list with the goal of increasing awareness of the impact of food production on the environment
  + This information is translated by converting the CO2 output of production of the items in the list to the equivalent miles driven by a standard economy car.
  + As the user inputs the item and weight, the miles are updated at the top of the list.
  + Each food item will also display a bar representing the percentage of the items’ contribution to the list’s total carbon output. This helps visualize the difference in carbon output between different food types. ~~For example, food products derived from animals contribute significantly more emissions than fruits and vegetables.~~
  + User logs-in and her list from the previous session automatically loads.
  + The user can check-off an item on the list, this information is also stored on the backend
  + An item’s quantity can be updated on the list as well
* Technology
  + Back-end:
    - Python, Flask, Postgres, SQLAlchemy
  + Front-end
    - React, CSS-Grid, Flex-Grid, Styled-Components, React-Spring, React-Reveal
* Technology walk-through
  + User can use the search bar to add food items to the list.
    - The search bar displays food item suggestions as the user types, these are generated by an algorithm on the backend built using a Trie data structure and the database’s food items
  + Foot item data and user data were stored on the backend using PostgresQL.
  + The server was built using Flask web framework with RESTful API endpoints. These endpoints
  + The front-end of this app was built entirely using ReactJS. The components state was managed using native react, and the hierarchy of components was carefully designed to minimize loading inefficiencies and ‘component drilling’ of props into children components
  + React-Spring animation library was used to animate the addition of items to the list