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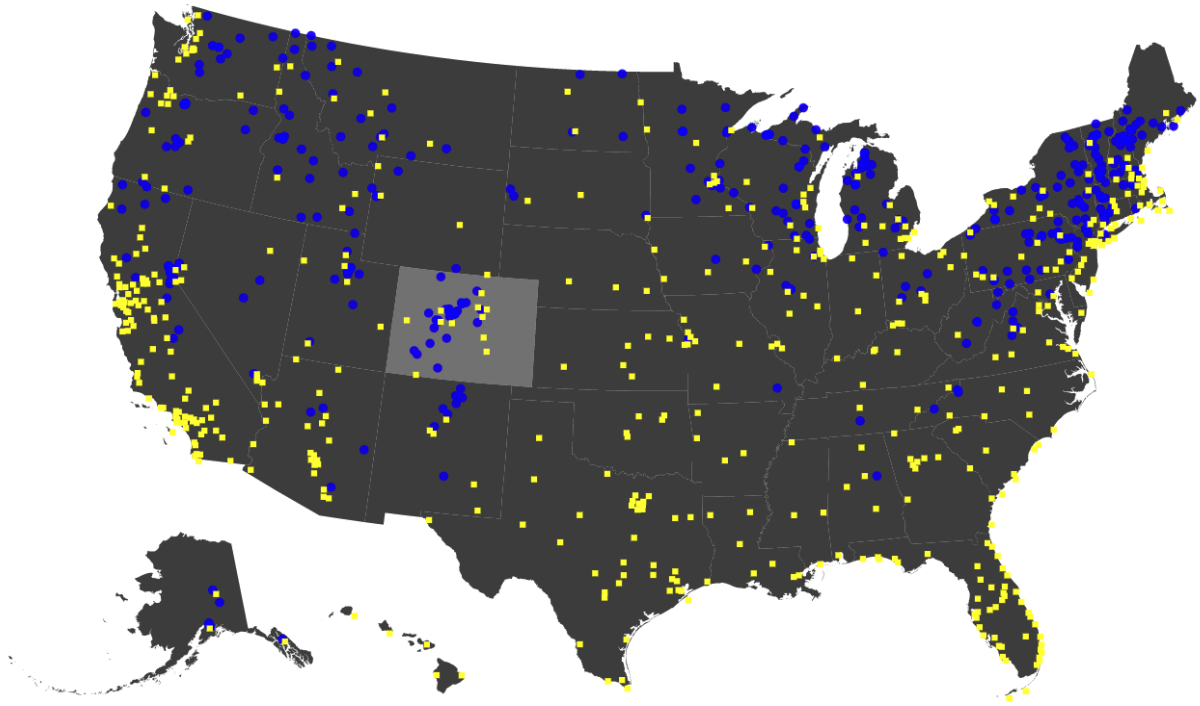
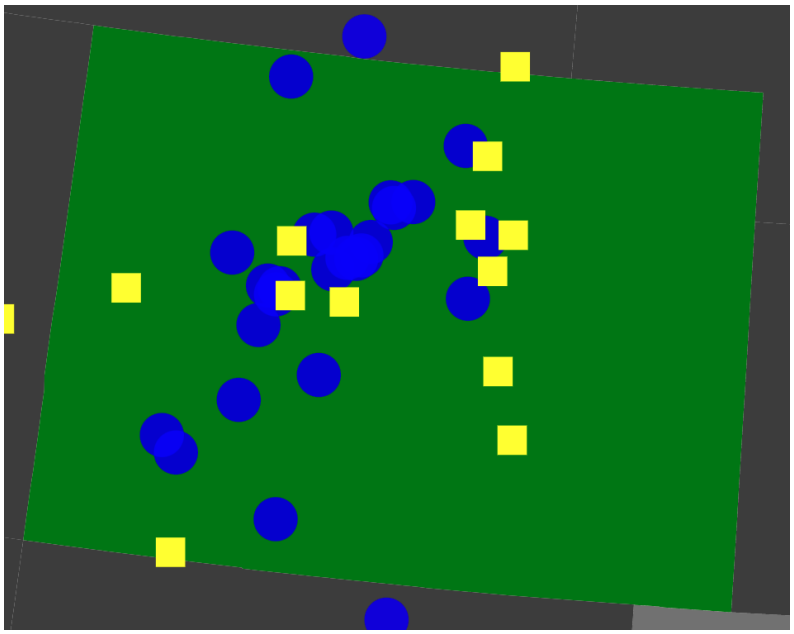
Data Visualization and Exploration Deliverable 2
March 31, 2022

Part 1: Images and Descriptions



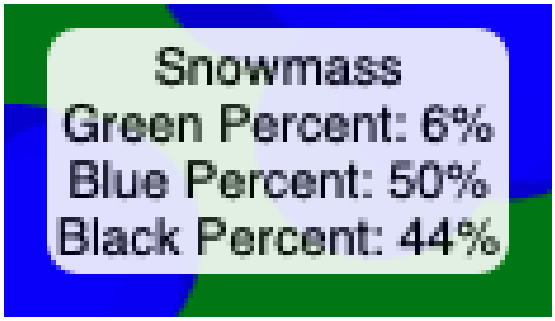
Dashboard of the ski resort locations (blue circles) and the airports (yellow squares).

This visualization of the map allows the users to see the location of the ski resorts (blue circles) and surrounding airports (yellow squares) within the United States. The user can click on a state to zoom in, or use the scroll bar to zoom into the map. When the user scrolls over a blue dot, the name of the mountain appears along with some other statistics of the mountain such as summit height, total vertical drop, and number of lifts. These statistics give an indication of the size of the mountain. Also, a user can click on the mountain location to show the difficulty of the terrain at the mountain. When a yellow square is scrolled over, the name of the airport appears.



Clicking on a state (Colorado) will zoom into the state and turn it green. This is helpful for getting a closer look at an individual state or an area of the country that the user is interested in visiting or moving to.

Scrolling over a blue dot will bring up the mountain's statistics including name, skiable acres, summit height, vertical drop, and number of lifts.



Clicking on a blue dot will show the percentage of each difficulty of the trail with green being the easiest, blue being medium, and black being the most difficult.

Scrolling over a yellow square will show the name of the airport.

Part 2: How users will achieve tasks

We selected four potential users of our dashboard:

1. Someone looking to plan a trip to a ski mountain
2. Family looking to move to a ski town
3. Someone looking to recommend regions of the country to ski at multiple mountains
4. Weatherman analyzing regions of the country that receive the most snowfall

For this prototype, we focussed on including the first three users. For the final dashboard, we plan to include information about total snowfall for a weatherman. A user looking to plan a trip to a mountain can use this visualization to select a mountain based on multiple factors. First, they could pick a state to travel to and click on that state. Within this state, they can investigate multiple mountains by viewing the mountain statistics (skiable acres, summit height, vertical drop, and number of lifts) and difficulty of terrain. From there, they can then look at airports that are close by to see if it is easy to get from the airport to the mountain. Using all of these features of the dashboard, they can decide on a mountain to travel to.

For a family looking to move to a ski town or purchase property at a ski mountain, they would use the dashboard in a similar manner as the first user. However, they also may want to view the density of mountains in a certain region. If the user is not planning to move somewhere full time, they would also need to look at the airports that are in close proximity to the mountain they are buying property at.

Lastly, a user looking to plan a trip to multiple ski resorts would use the dashboard to select a region of the country that they are interested in visiting. This could be a state or an area between multiple states. Another consideration for this user would be if they are planning to drive or fly between the mountains. If they plan to drive, they would want to pick a region with a high density of mountains to minimize driving time. However, if they plan to fly, they may want to consider choosing mountains that are closer to airports. For example, Colorado would be a good location to drive between mountains, but a state

like Montana or Idaho would not be great because of the distance between the resorts. The New England region would also be a good option for driving between resorts, but these mountains would be significantly smaller than the mountains out west, which could be determined by looking at vertical drop and total acres.