SnowGauge

**Definitions:**

* Season
  + Can define as September through August
    - Most ski resorts in the northern hemisphere open around Thanksgiving and close around mid-April, but some resorts like Timberline on Mount Hood are open until mid-August. I feel this should still be defined as part of the prior season although it is arbitrary.
* Run
  + A period of descent following a period of ascent
* Day
  + One recording session (can be paused and resumed)

**Features:**

* Bare minimum
  + Record, pause, stop
    - We need a button and method for determining when data should be kept track of and when it should be ignored
  + Number of runs
    - Kept track of as state within a current recording session
    - Incremented once a user begins to drop altitude after a period of gaining it
  + Vertical drop
    - A total of the number of feet descended during the day or season
  + Speed
    - Current speed
    - Max speed
    - Average speed
    - Optional:
      * Average moving speed
      * Average downhill speed
      * Average/fastest/slowest uphill speed?
        + Could be fun to log the average speed of ascents (on lifts) so users could compare the lift speeds at different resorts
* Do if we have time:
  + Changing units
    - Ability to change from metric/imperial
  + Historical Data
    - Once the stop button is pressed all of the data is saved into a data structure (probably a Map) and written to disk
    - The data is also used to update any season data currently on disk
  + Leaderboard
  + User accounts
    - Name
    - Email
    - Ski or snowboard
  + Map view
    - Display user’s current location on a map
    - Display other user’s locations on the same map

**Activities:**

* Basic recording:
  + A user first opens the application. The first thing they see is a welcome page with the application’s title along with a large, red, record button. The user then presses the record button to begin recording their location information while skiing or snowboarding. At this point, if this is the first time the user has used the application, the user will be prompted to allow location use by the application. After the user allows the location usage, they are shown the recording page. This page has separate boxes with all their current data such as current speed, max speed, elevation, number of runs etc. The user would then spend their day skiing and recording. Once they are done recording they press the record button. The user is shown a prompt for whether they would like to finish recording or pause the recording. The user selects to finish recording and is then shown a prompt for whether they would like to save the recording or discard it. Once they press the save button the data is saved to disk and a confirmation of the save is displayed to the user. The user then exists the application.

A diagram of a computer program

Description automatically generated

* Viewing historical data and deleting a recording
  + Open app, press button to view historical data, see a list of dates than can be selected, press on a date, see page displaying various statistics from that date, press delete button, see a prompt for confirming delete, press confirm button, see list of dates minus the one that was deleted
* Viewing leaderboard and changing categories
  + Open app, press button to view leaderboards, see a list of users ranked by number of days recorded listing names and number of days, press dropdown that currently says “# of Days”, select “Total Vertical” from dropdown, see a list of users ranked by total vertical in the season, repeat for other categories….