SNOGO

Snowsports analysis and tracking application

Usage and Installation Manual

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Installing SnoGo

Installing SnoGo is quick and easy.

T o begin to use SnoGo you must first make sure it is correctly installed on your machine. If you are relatively familiar with computers this initial guide is most likely not needed and you may skip ahead to usage instructions. If you are not familiar with computers at all continue reading and this will cover everything you need to know to get SnoGo functioning on your machine

Before you attempt to install SnoGo make sure Java is installed and up to date on your current device: https://www.java.com/en/download/.

Downloading and File Explorer

Once you have downloaded SnoGo use the file explorer to place it in a known location in your files for easy access. Providing Java is installed correctly; a simple double click of the icon will launch the application into the home screen. This application uses a local database to store users and user information on the system, this means as you launch the application for the first time a file will be created automatically for you in your home directory. This is typically in "C:\Users\YOUR_USERNAME" for windows and similar locations in other operating systems. You will not need to do anything with this file that is created it is just worth noting as deletion of this file will result in the loss of user data.

Ease of Access

This application uses .csv files when importing data for analysis. To make this easier it is recommended but not necessary to keep your tracking data located in the same (or similar) directory to that of the Snogo.java file.

Quick-Start Guide

Upon launching of the application, you will notice the ability to switch tabs and access to the rest of the application is currently restricted. This is because SnoGo is a user-oriented application to maximize the accuracy of statistics and analysis of individual progress. Therefore, to continue you must create and set a profile, luckily with SnoGo this is extremely straight-forward and easy.
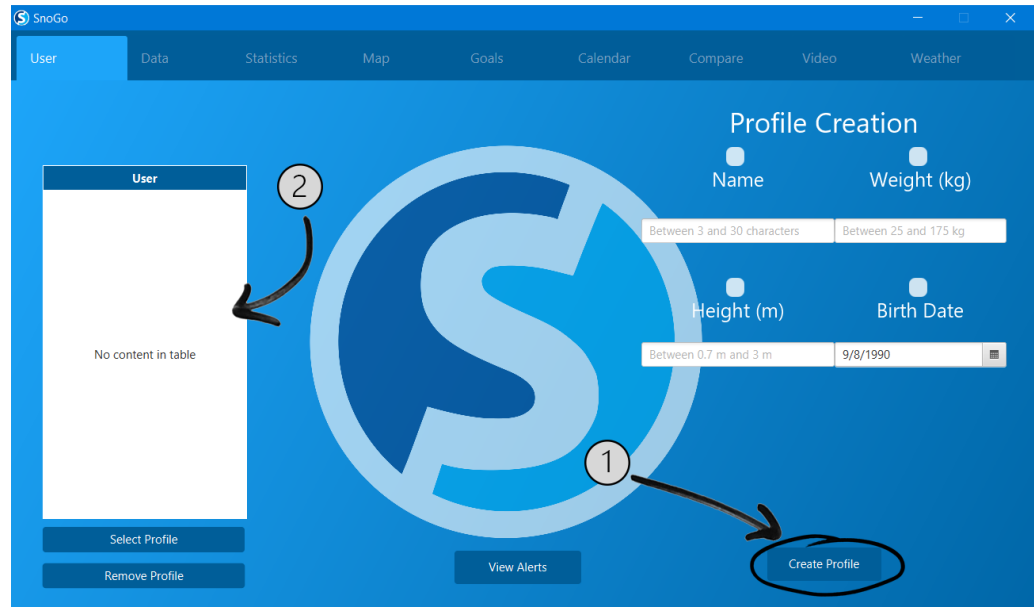

First enter the appropriate details in the require formats on the right-hand side starting with your name, weight, height and birthdate respectively. Once this is complete and no syntax errors are detected by the program, the create profile button **(1)** should function as intended and upon activation will create and store your new profile ready to use! Once your profile is created you will notice the user list on the left **(2)** is now populated with your profile(s), to gain access to the rest of the application for a specific user all that needs to be done now is simply select the profile you wish to use and click select profile. Providing there have been no errors so far you should now have access to the rest of the application attached to the currently selected user. If this is not the case please refer to the troubleshooting section of the manual.

This section is always available whilst the application is running allowing you to create/edit/delete profiles at a whim. While a profile is currently selected editing is as easy as simply changing the values you input into the text boxes on the right-hand side of the window. Just remember the profiles and all their respective information is stored inside a local database within your PC, this means deletion of a profile within the application or of the physical database in the file explorer will result in data loss.

Data Upload

Now that you have created your profile and selected it you are ready to utilize SnoGo to its full potential. For your data to be analyzed and stored it must first be manually uploaded to the application. This can be done in one of two ways; the easiest being a simple file upload (.csv) and the other being manual data entry.
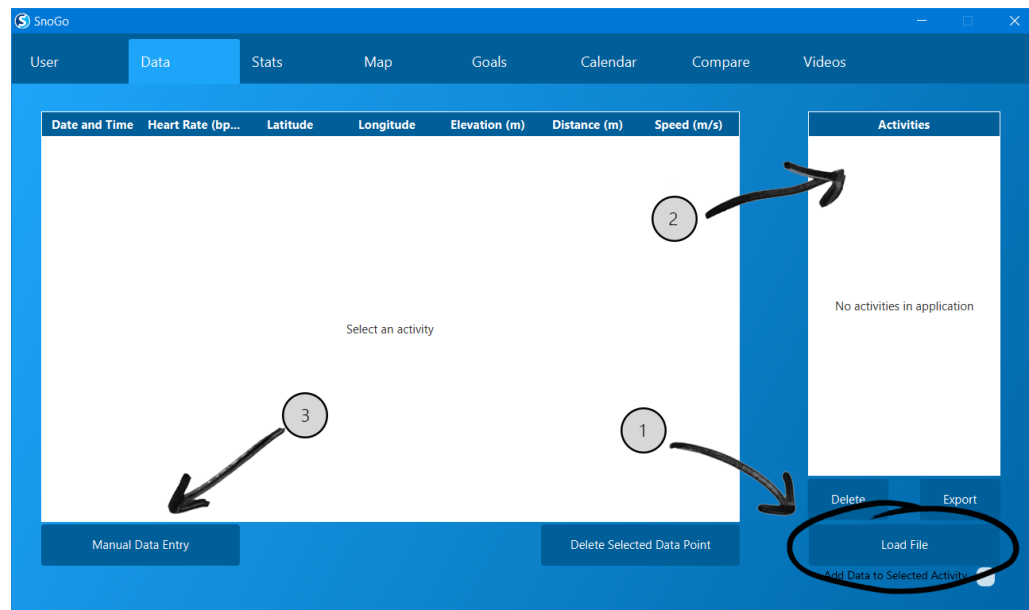

For data uploading first make sure your recorded/logged information is stored in the correct format in a .csv file (the application will refuse all other file types and alert users if data is corrupt/missing). Once this is done it is as simple as selecting the load file button **(1)** and using your system's file explorer to locate your respective file (as mentioned earlier it is recommended to keep your log files somewhere easy to remember e.g. the current directory of SnoGo. Providing no alerts are triggered and the file upload is successful you should now see your uploaded activity/activities stored in the table labelled Activities **(2)**. Similarly, to that of the user tab you are now able to select your intended activity by simply clicking on it, this will show all the raw data in the main data table allowing for deletion of specific data points, manual analysis and deletion.

If for any reason data is missing or you are unable to follow the previous steps you may manually enter data by selecting the Manual Data Entry button **(3)** and filling in the appropriate fields in the pop-up data entry window that will appear. This window contains and handles all needed interactions with (and the display of) your data. If data does not appear in the table after filling all the above criteria refer to the troubleshooting section.

Activity Statistics

SnoGo displays your activity data in easy-to-interpret graphs and tables allowing you to see your ski-run in ways you never have before. To do this select either the activity you uploaded in the previous section or one of your many input activities. This is done through a simple drop-down menu **(1)**; select the intended activity and choose "View Activity" this will input all the selected data into its own set of graphs and displays showing speed, distance, heartrate etc. Now that you have the application displaying your currently selected data in this way you may want to do this for all data over a specific period or (if you're a hardcore tracker) over all time.
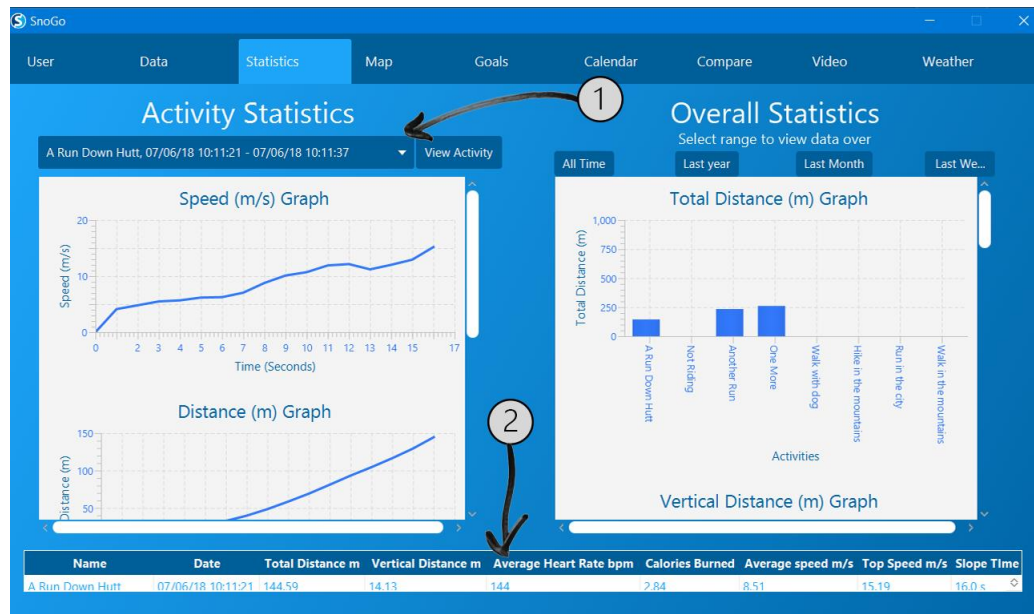
This shows totals and other information appropriate for entire data analysis such as total distance and average speed overall. Data more appropriate for table display is shown down the bottom of the window **(2)**. If for any reason data does not load/display and no alert is displayed please make sure the data is not corrupt/missing significant data points, if this is true and data is still not displaying please refer to the troubleshooting section of this manual.

Interactive Map

SnoGo features an interactive map using the Google Maps API allowing you to view the run you currently have selected. Other ski-runs on the mountain are shown and the entire path is highlighted in red from when the data is first collected to when it stops (represented by pins). If you are generally familiar with using Google Maps or any other main-stream map software this tab is generally quite straight forward. If you are unfamiliar with general map software, simply select your desired activity from the Activity Table **(1)** and your run will automatically shown on the map and framed in such a way that it is included in its entirety. You are then able to click and drag your way around to view each run.
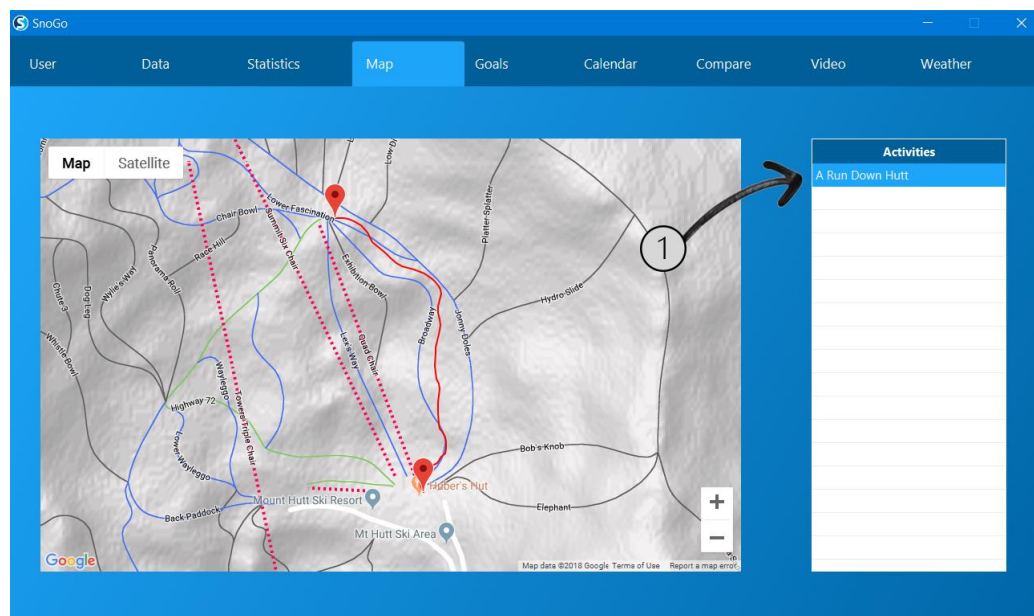
This feature is useful in helping to pinpoint certain times in your run that are of statistical significance and to bring a general spatial awareness to your logged runs. This application includes either a satellite or simple map view depending on which you prefer but due to the nature of this program being based around ski-fields we recommend satellite view.

Goal Setting & Creation

Although everyone has their own way to track their milestones and goals SnoGo has a built-in goal tracking and creation feature. This allows you to 'set and forget' as (providing you keep your tracked data up to date) this application will automatically alert you upon reaching a set milestone or goal.

To start tracking the goal you want it must currently fall under the categories; top speed, calories burnt, average heart-rate, vertical distance and distance travelled. Providing your goal falls within one of these criteria simply enter the metrics you wish to achieve in the text boxes on the right. Each text box is accompanied by a select node displaying whether or not the respective input falls within the syntax requirements for goals. Note: if measured over all data is selected then previous data that has been input into the application will be analyzed, this feature is useful if you are wishing to check if a goal has been previously achieved but this is NOT helpful if you are wishing to start a goal for future achievement. Once all required metrics have been entered simply press the 'Create Goal' button **(1)** and your goal will be entered into the provided table. The goal name, metrics, values, completion date and status are all shown alongside each goal for easy viewing and interpretation **(2)**.

When a goal is achieved both the status (i.e. true, false) will be changed and an alert will be generated for the user, this means a goal will never be missed or forgotten. Achieved goals will remain in the system until manually deleted by the user. These goals are user specific and will only pertain to the currently selected user.

Calendar View

If you wish to view your data, alerts and goals in a specific chronological way then then make use of the calendar tab. This gives the user an option to pick a specific time window between dates to show all related time-oriented information. Simply select the initial date of the time window you wish to analyze from the left, and the closing date on the right.

Goals for the currently selected timeframe **(1)** are shown on the left in the same format as explained earlier in the goals section of the manual. This is useful for when you are tracking multiple goals in set time frames and wish to narrow down your results for more specific and targeted tracking. Alerts (which are covered later on in the manual) that were displayed during the currently selected time window are shown on the right showing the type, date and description of each relevant alert. If any of your uploaded activities fall within your chosen timeframe, then relevant information regarding each activity will be displayed down the bottom of the window.

This tab is purely a viewing window and no editing of information is allowed. If you wish to edit any of the information displayed on the screen you must access the respective pane of each data type. For goal editing and addition see the previous section on graphs. For current alert viewing and interaction see the alert section within the user tab. For activity viewing and editing see the data uploading and editing section of the manual. Note: after selecting your dates within the date selector window it may be displayed in the format 'mm/dd/YYYY' depending on your system's default language selection, providing that the correct date is selected on the drop down calendar this is not an issue and is purely a cosmetic irregularity.

Data Comparison

What is data collection and analysis worth if you are unable to compare previously collected information with current and past data? This is where the comparison tab comes in. Providing the information you want to compare has been uploaded into the application correctly (see data upload and entry); this window allows you to easily select from your stored activities to show an instant comparison of key metrics calculated automatically by SnoGo. This easy tile-layout shows data from the left and right data sets in their respective areas with each tile being colour coded to allow for easier viewing in showing higher (green) vs lower (red) valued statistics. Data that is similar is not colour coded as this pane is for primarily comparing medium to major differences to allow for easier improvement tracking.
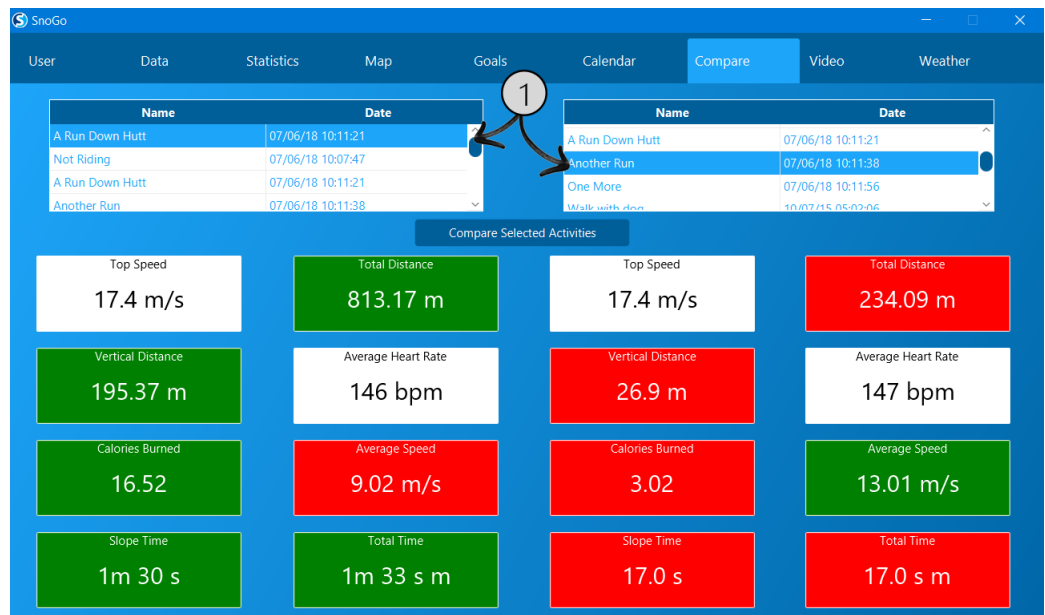
Simply select your two data sets from the scroll menus provided **(1)** and select 'Compare Selected Activities' this will initialize the comparison described above and displays it in the mirrored fashion shown above. Note: This section is useful for comparison similar or the same ski-runs as a large difference in terms of size/difficulty could result in unfair comparisons (i.e. Vertical Distance, Total Distance) where data like average heart rate is more suitable in this comparison.

Video Linking and Uploading

Why try to connect data and display it in tabular form when you can take it a step further? The video linking feature in SnoGo allows you to upload videos of your runs and 'link' them to the specified run. This allows you to achieve a better understanding of what actually went down and the specific time frames and causes of data logged during your run.
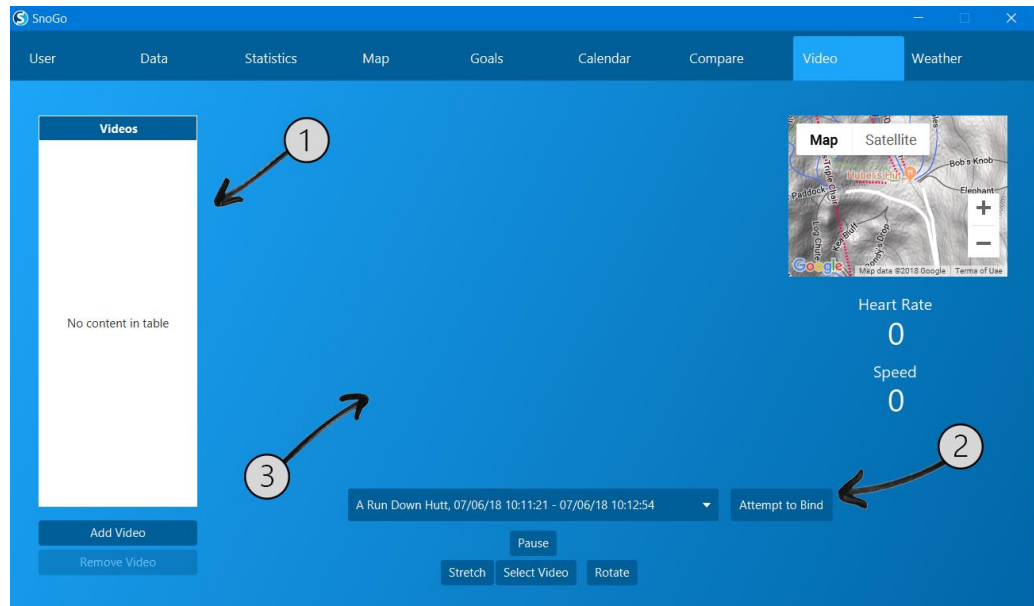

Upon selecting the 'Add Video' button, it is as simple as uploading run data previously covered in this manual. Note: make sure the raw data for the run you have filmed is already properly uploaded and stored before attempting to upload the video, attempting to upload video that is not within the timeframe of data in the system will result in an error, and in turn, cause the video to not be able to be linked. Once you have uploaded your run video it should be added to the list of videos within the application **(1)**, simply select the video you wish to link to your data and from the drop-down menu **(2)** and select the run data you wish to pair it with. Providing it meets all criteria mentioned above the video will then be linked to the respective data set and displayed to view in the center of the pane **(3)**.

Currently this uses the meta-data from the video footage to 'synchronize' the video with the displayed information. This can be inaccurate if the current time and date on your recording device is invalid or incorrect. To ensure the most accurate of linking please make sure the time and dates of the uploaded data is in-fact the same as that of the timestamping of the recorded video.

Weather Forecast

All snow-sports rely heavily on the state of the weather, for this reason SnoGo comes packed with a future forecast window to display upcoming weather on your select favorite ski fields. This is external to the application and takes data directly from snow forecast data appropriate for your skiing needs containing over 3100 snow fields.
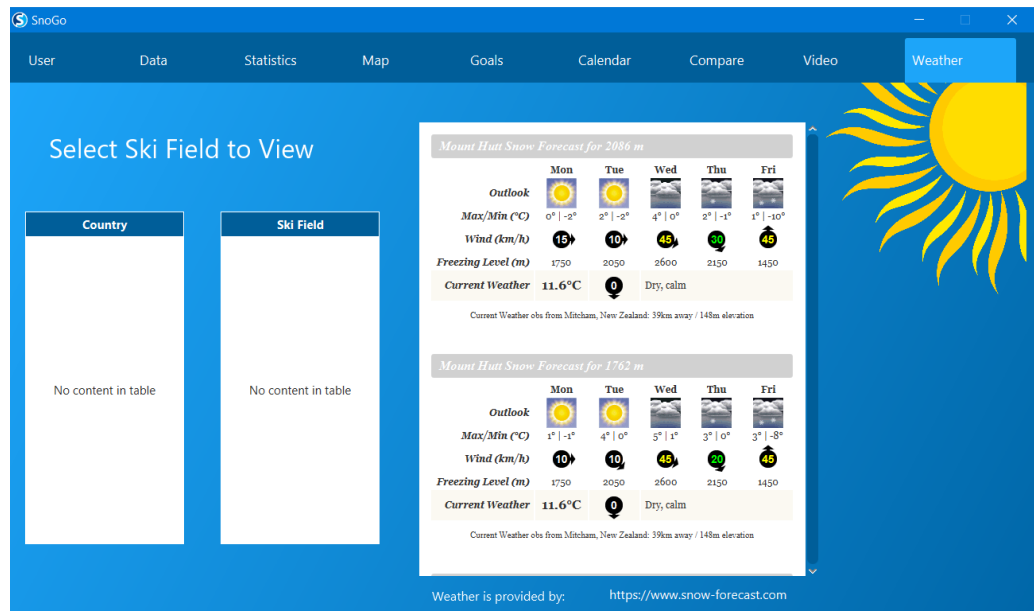
Health and Alerts

Any alert-types ranging from health alerts to system error alerts are all kept and displayed within the 'User' tab. This ensures you never miss out on an important alert and ties in heavily with the app's automatic health and safety detection, alerting you to any potential health issues. Note: Do not use the application as a sole detector of health issues and always see a medical professional if you have any questions or concerns.
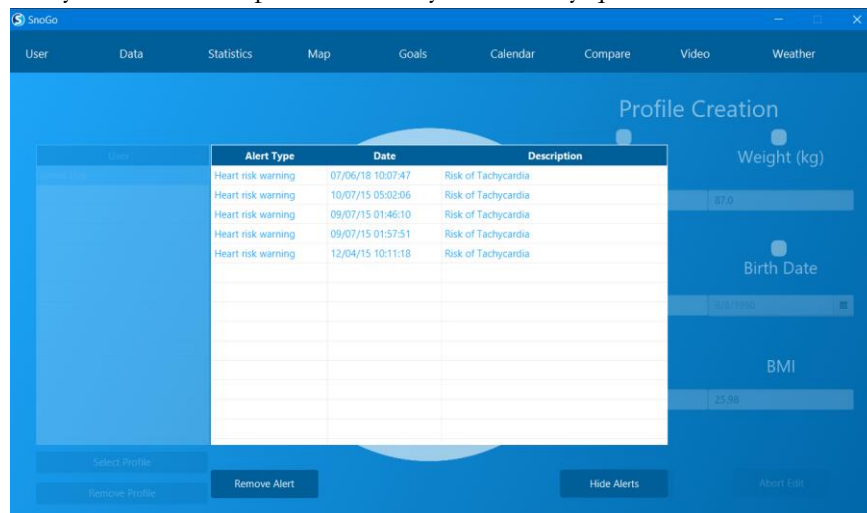
TROUBLESHOOTING

Q: My file is being rejected when I try to upload it? Why is this?

A: Upon uploading your .csv files any minor errors should be displayed within a pop-up or in the alerts menu. If this is the case, simply correct the errors shown. If this is not the case, there is something majorly wrong with the file you are attempting to upload either in terms of large amount of corrupt/missing data or an incorrect data/file-type.

Q: My data is uploaded but I am unable to select graphs/display my data?

A: This is most likely due to there either being insufficient data points for graphical display or an error in the formatting of your .csv file. Most major problems should have been detected upon upload therefore re-check your data points and edit/add any that are an issue.

Q: My maps and/or weather are not being displayed?

A: These two features require an internet connection due to both requiring external data for the app. If there is an issue with the application reaching the internet the map will still display the path in terms of co-ordinates, but no map information will be displayed as this is not stored within the app. Without internet the tables are also empty for selecting your ski-field within the weather tab and no forecasts will be displayed.

Q: I have exported a file out of the application, but I am unable to locate it?

A: Providing the file has properly exported it should automatically be located in your PC's home directory. If you do not know where this is located on your computer please refer to https://en.wikipedia.org/wiki/Home_directory on information regarding your default directory.