Requirements definition

ID	Name	Description	Priority		Actors
User Management					Administrators
UM-1	Administrator create user account	An administrator should be able to create new user accounts (administrators o researchers) with its personal information: username, password, name, surname, email and contact number (optional)	Medium		
UM-2	Administrator delete user account	An administrator should be able to delete a user account. Note: disable deletion of the last administrator account.	Medium		Researchers
UM-3	Existing user sign-in	A user should be able to log in with his/her username and password	Medium		Users (administrators and researchers)
UM-4	Existing user sign-out	A user should be able to log out	Medium		
Project Management					
PM-1	Administrator project visualization	An administrator should be able to see all the settings and projects	Medium		
PM-2	Researcher project visualization	A researcher should be able to see all the projects to which he/she has been given permission	Medium		
PM-3	Project creation	An administrator should be able to create a new project with its name and description	Medium		
PM-4	Project removal	An administrator should be able to delete an existing project along with its experiments and added videos	Medium		
PM-5	Project edition	An administrator should be able to update the name and description of an existing project	Medium		
PM-6	Granting access permissions	An administrator should be able to grant permissions to a researcher to access an existing project	Medium		
PM-7	Revoking access permissions	An administrator should be able to revoke permissions to a researcher to access an existing project	Medium		
Experiment Management					
EM-1	Experiment addition	Users should be able to add new experiments to an existing project with its name and description	High		
EM-2	Experiment removal	Users should be able to remove experiments from an existing project along with the added stimuli videos	High		
EM-3	Experiment edition	Users should be able to edit the name and description of existing experiments	High		
EM-4	Note addition	Users should be able to add notes to an existing experiment at specific points in a video	Low		
EM-5	Note edition	Users should be able to edit notes of an existing experiment at specific points in a video	Low		
EM-6	Note removal	Users should be able to delete notes from an existing experiment at specific points in a video	Low		
Stimuli Video Management					
SVM-1	Stimuli video addition	Users should be able to add videos (links) representing stimuli to an existing experiment	High		
SVM-2	Stimuli video removal	Users should be able to remove videos representing stimuli from an existing experiment	High		
Experiment Execution					
EE-1	Reaction recording	Users should be able to record a reaction of the experiment with a stimuli video already added and enter the participant's name	High		
EE-2	Reaction removal	Users should be able to delete a reaction of a stimuli video	High		
EE-3	CSV files with all raw data	Users should be able to export the raw data of visage|SDK for all reactions in CSV files	High		
EE-4	CSV files with raw data per reaction	Users should be able to export the raw data of visage|SDK for a reaction in CSV files	High		
Data Visualization					
DV-1	Emotions over time	Users should de able to see a plot that shows how magnitudes of basic emotions change over time. I.e., it would be a line chart in which x-axis is time and y-axis is magnitude of emotions (from 0% to 100%). Different emotions can be plotted as lines of different colors in the same graph or in multiple subplots one below the other	High		
DV-2	Dynamic charts	Users should be able to see plots showing numbers numbers and corresponding bar charts dynamically while playing the video stimuli. In other words, instead of observing the fixed graph, researchers would be able to view the same video that was used in the experiment and see magnitudes of participant's emotions as numbers and bars besides the video for the current timestamp of the video, changing as the video progresses. This is useful, as it is easier to relate what is happening in the video with current magnitudes of participant's emotions. It also allows researchers to pause to video, or jump to a specific timestamp	Medium		
DV-3	Distributions of participant's emotion	Users should be able to see boxplots per experiment per participant which shows distributions of participant's emotions. The x-axis would be emotions, the y-axis magnitude	High		
DV-4	Emotions in time per experiment	Users should be able to see line charts of emotions in time per experiment, but across all participants in the experiment, showing the average emotion in each timestamp of the video. Additionally, shading around the line charts should depict one standard deviation	Medium		
DV-5	CSV files with all visualizations	Users should be able to export all the visualizations in CSV files	Medium		
DV-6	CSV files with a visualization	Users should be able to export a visualizations in CSV files	Medium		
Non-functional requirements					
NFR-1	Simple and clean interface	Make the most important actions very simple and efficient for researchers. The organization of experiments should be clear and the user interface should be self explanatory focusing on the limited, but relevant elements	High		
NFR-2	Responsive design	The web application must have a "responsive" design in order to ensure proper display on multiple personal computers, tablet devices and smartphones	High		
NFR-3	Privacy	Images or videos of participants should not be stored, transferred to the backend, nor processed outside visage|SDK	High		
NFR-4	Efficiency	Data should be available for analysis right after the experiment is recorded (i.e., scheduled ETL or similar processes should be avoided). visage|SDK works in real time and amounts of collected data are small, so this should be reasonably possible	High		
NFR-5	Interesting interface	Spark curiosity and motivate researchers to ask additional questions and to see different perspectives. Also, visualizations should be clear and, ideally, interactive (e.g., mouse hover should show X and Y data in each point)	High		

User stories

ID	Name
US-01	Administrator create user account
US-02	Administrator delete account
US-03	Administrator logs in, sees all projects and logs out
US-04	Researcher logs in, sees all projects and logs out
US-05	Administrator creates project, edits it and removes it
US-06	Administrator grants and revokes project permissions
US-07	User creates experiment, edits it and removes it
US-08	User adds note, edits it and deletes it
US-09	User adds stimuli video and removes it
US-10	User records reaction and deletes it
US-11	User downloads all the raw data of visage|SDK and the raw data for a single reaction
US-12	User sees emotions over time
US-13	User sees dynamic charts
US-14	User sees distributions of participant's emotion
US-15	User sees emotions in time per experiment
US-16	User exports a single visualization and all visualizations in CSV files