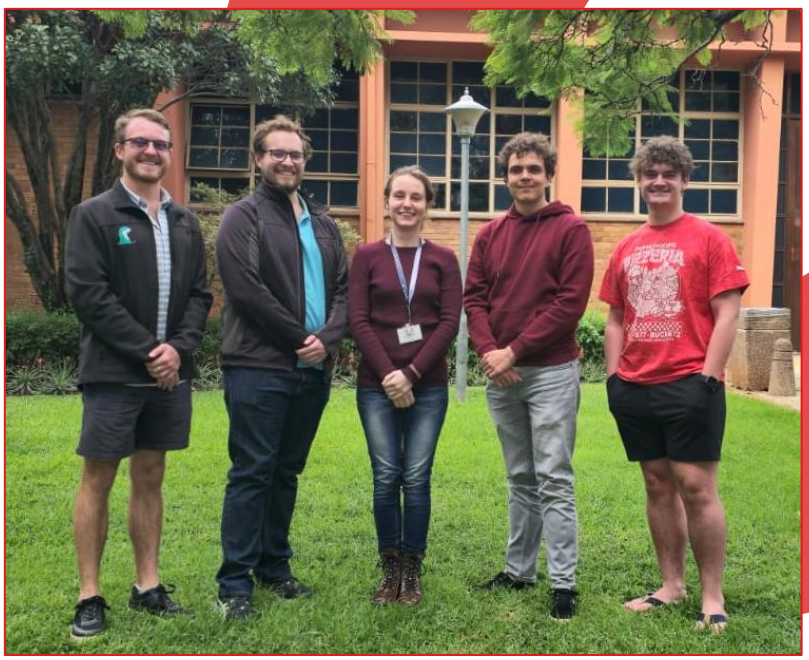
SuperLap Racing Line Optimization System

EPI-USE



Quintessential

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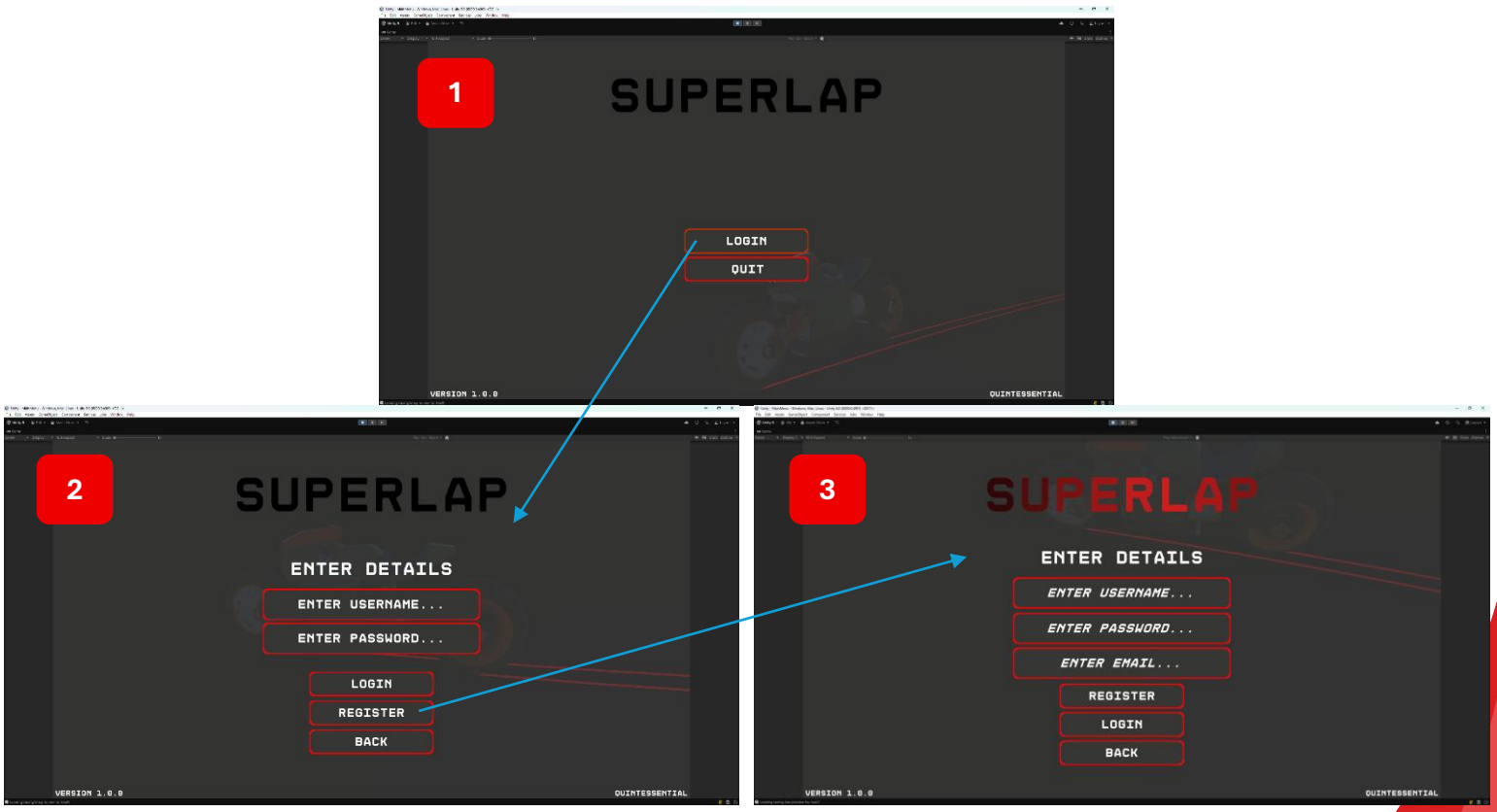
User Manual

System Requirements

- Minimum hardware and software requirements to run the system.
    - Windows OS (for the current system)
    - Unity version 6.0 installed.
    - Docker Desktop should be installed

Step-by-Step Workflow

1. **Login and Register**

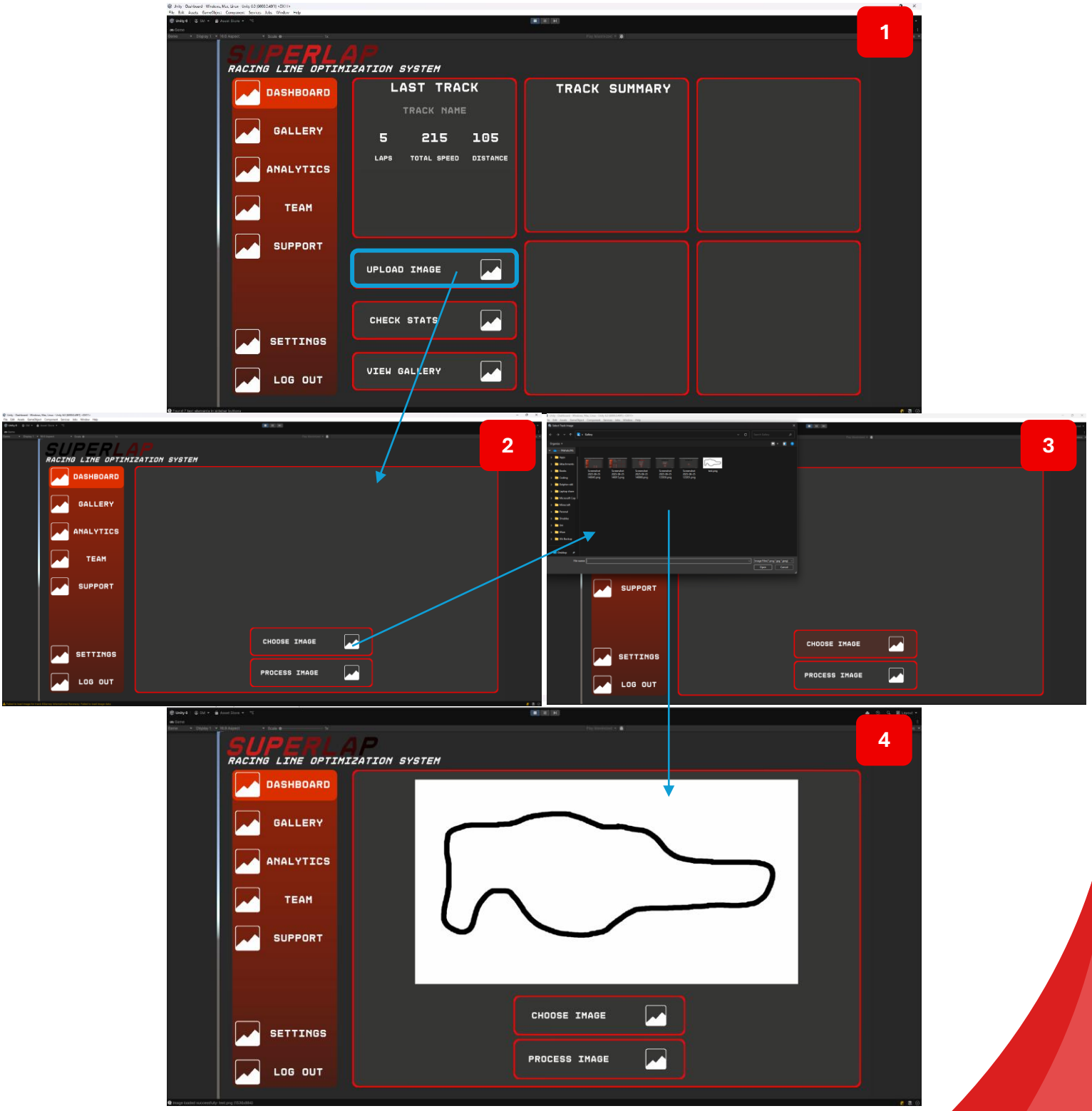


Once the system is installed and running, a user should select on “Login”. Here a user is able to enter their username and password to enter the system.

If a user has yet to sign up then they can select the “Register” button and sign up for the system. This includes registering their name, email and password.

They will then be directed to our “Dashboard” page.

2. Upload a Track Image

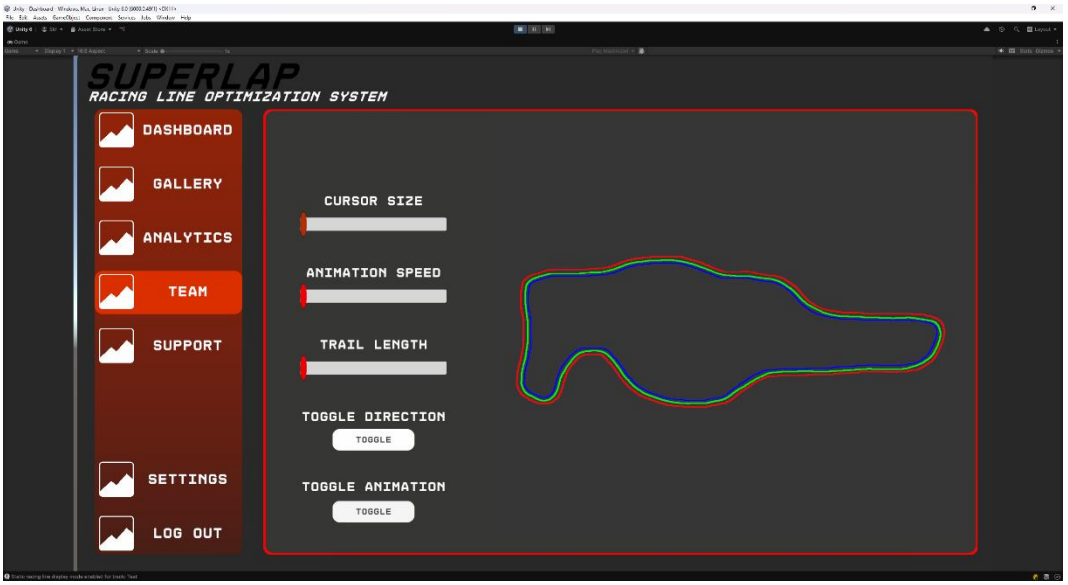


While on the “Dashboard” page a user is able to up load a track image from their device. Once an image has been selected, the user must select on “Choose Image” button.

3. **Processing a Track Image**

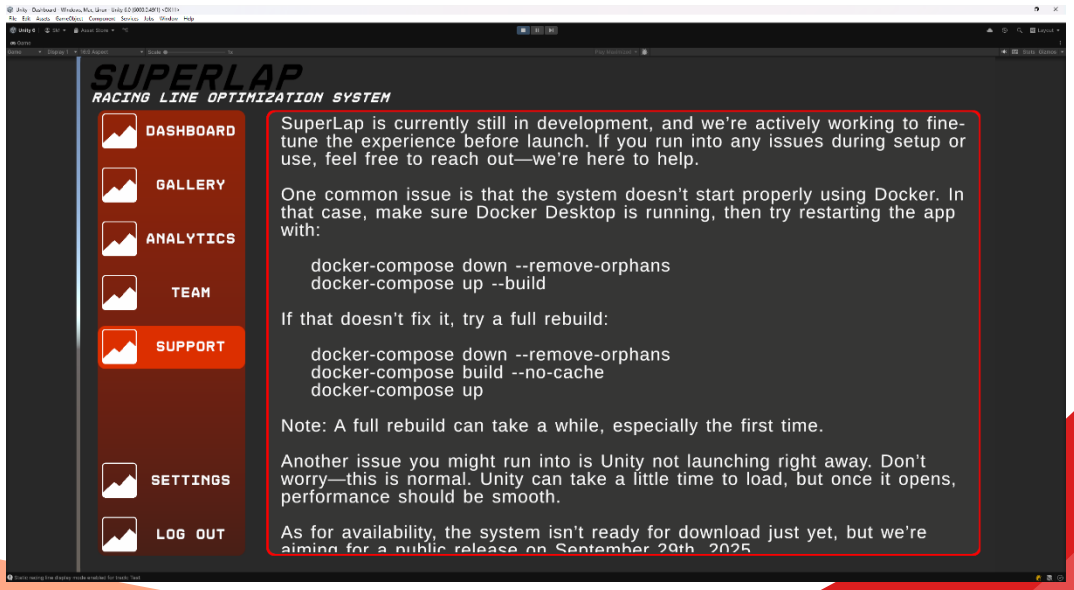
   After an image has been selected, it is uploaded to the backend of the system. First the Image processor takes the image and calculate the outer and inner bounds of the track. These parameters are then passed into the Raceline Optimizer which uses a partial swarm algorithm to calculate the best track for that specific line.

4. **Viewing Results**



   Once the system has analysed the track, it will display a track with red and blue line, the red line is the outer bounds of the track, while the blue is the inner bounds of the track. The green line, is the best path for the rider to follow around this specific track.

5. **Support Page (“Help Page”)**



This page has some common issues that some might run into when running our system. It also has an FAQ and contact link for interested users.

Troubleshooting

- You cannot log into the system?
  - Ensure that it is running first.
- You can't upload an image?
  - Ensure the system is still running and has not crashed.
- If Docker will not run try the following in the terminal (only run the next one, once the first is finished building):

```
docker-compose down --remove-orphans
docker-compose build --no-cache
docker-compose up
```

Contact or Support Info

Please send any issues you may experience to our email at:

ctprojectteam3@gmail.com