# Future Work

In this work, we showed that automatically difficult adjustment and personalisation are the keys towards more *Engagement* in racing games. The next steps will contain a more detailed investigation of *Education* and *Performance*. To improve the statistical value, the number of test users’ needs to be extended. Due to the promising outcome of this project, many future expansions are conceivable. The main ideas and suggestions discussed in this section are centred around the initial idea to improve \textit{Engagement}, \textit{Education} and \textit{Performance} in race games. This section will outline the most promising suggestions.

## Framework improvements

At the moment, only a prototype is developed. It will require major rework, to fit the requirements of a sophisticated tool for researchers and game developers. The current implementation of the racing simulation only supports one player and one ghost car on one track. To investigate multiplayer behaviour an extensive upgrade is needed. The users were satisfied with the provided level of realism. To match the graphical quality and realism of state-of-the-art racing simulations will probably never be possible, but the upgrade to a more performant platform will reduce the gab. Currently, all assets are taken directly from the Unity asset store. Cooperation with artists and graphic designers could improve the whole scenery. Having assets from one source would make the scene more harmonic.

## Further user studies

A big restriction in our study is the relatively low number of participants (n=38). Additional studies should include more participants. A key outcome of our evaluation was that the current methods to measure the learning process and driving skill are not sufficient. A simple solution is to integrate more detailed performances metrics and extend the investigation on driving patterns. In the next step we suggest, developing special race tracks, with track layouts, that test specific driver skill. Integrating these tests should give a more complete and exact performance estimation.

## Integrating commercial simulations

A central idea is to integrate *Virtual Rival* in a commercial racing game. Gather information off millions of players increases the statistical significands’ and allows a more detailed and exact evaluation. A completely different idea is to use existing data provided by commercial simulations. Analysing the data on similar patterns can further reinforce the results of this work.