ViRMA: Virtual Reality Multimedia Analytics

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Project Outline

We are actively developing a new prototype for analysing large multimedia collections in virtual reality.

This work has been built on VRLE, a VR-based prototype for exploration of lifelog data, which consists of images and other data gathered continuously by an individual using automated cameras and sensors [1]. VRLE won the first lifelog search challenge (LSC) in 2018 [2][3]. The work is also built on previous work on multimedia analytics from ITU [4].

We have purchased several Valve Indexes for the ViRMA project. There are many ways in which students can contribute, including work on the user interface and the back-end, and later on running large-scale user experiments. Such projects could be suitable for 1-3 well-qualified students, both at the BSc and MSc levels. Successful projects are likely to result in international research publications.

Skills Developed

Depending on the project, the skills developed could include:

- Virtual reality application development in Unity
- C# / Monobehaviour API
- Back-end programming and data structure development
- Performance evaluation and analytic skills

References