2022/09/05

We got the chance to directly talk with Prof. Dileeka Dias regarding proposed projects on 5th of September 2022. As some other groups also interested on the same topics, we had to explain with the developments that we can add for the proposed projects. First we had to explain our interests and internship working experience.

As we searched facts before the meeting and went through a paper that sent by Prof. Dileeka Dias earlier, we had some new ideas for both interested projects. The paper was published by 2016 group which was described about their project on 360 immersive cycling. We proposed all of our ideas to Prof. Dileeka Dias and she was much interested on competitive cycling. She asked some questions regarding how could we start the project and which areas should we have to look about. She was satisfied with our answers and encouraged us to find more information on video optimization, 5G and cloud technology. We were asked to make a report on our idea and send it to her.

We got the good news of we were selected for the project among all other teams by an email sent by Prof. Dileeka Dias on very next day. We were very happy with the news and started our works on the project.

The project was named as “Competitive Cycling over 5G” and madam offered us it as a self-initiated project as the idea is ours.

First we went through the project report of 2016 batch group and the published paper. It was a project that proposes a novel approach to indoor cycling, combining key features including real-world 360-degree view, immersive environment, real-time interaction between the real and virtual worlds. In the proposed solution, a mobile application provides an immersive cycling environment by playing 360-degree videos on a Virtual Reality headset. The environment responds to user movements such as head rotation and cycling speed changes. They used a local server (raspberry pi) to host videos. Then we got a chance to meet group members of that project via zoom platform and discussed the project scope, pros, cons and challenges of their project.

After taking some basic idea on the project, we started to make our report with our proposed idea. Prof. Dileeka Dias said us that the task is to develop the 16 batch project with competitive cycling with hosting the videos in cloud based server and streaming them through 5G. We included our approach in the report as follows.

- Hosting the videos in cloud-based server and streaming them through 5G.
- Experience of competition
    - Process the video such that one competitor can see the other one.
    - 360-degree immersive vision
    - User dashboard for previewing statics of competitors
- Monitoring user health statics ➔ Heart rate , Calories burnt

Prof. Dileeka Dias accepted our report and encouraged us to go through research papers and other resources regarding each main points of our project.