DASS Client Meeting 2

Minutes of Meeting

Location: CIE

Time: 6PM

Date: 14th February 2024

Attended By:

1. Mr. Jaya Bhardwaj (Client)
2. Yashas S. B. (2022113001)
3. Saketh Reddy Vemula (2022114014)
4. Sai Deekshith Vaddineni (2022101110)
5. P.V. Sakthidhar (2022112005)

Discussion Points:

Progress on the goals from the last meeting:

1. Everybody has researched the basics of Computer Vision and its implementation. Different Python modules for CV were also discussed. 2. There was some confusion on whether to use a heuristic or GANs based approach toward the project.

Client's existing application was seen for the first time:

1. The client already has a tool to find key points and the best images given a set.
2. The software also can recognize photos of a particular person with their face. Uses a clustering algorithm.
3. Our product should be something that collaborates well with existing facilities.

Facets to correct any photo were discussed:
While stitching a photo we will have to think about the:

1. The colors in the image.
2. The orientation of the image.
3. The relative size of the part we should stich with respect to the image. **Already existing technology working on the same applications were discussed:**

1. Snapchat on how it uses key points to simulate things on your face.
2. Adobe photoshop on how it stitches images correctly.
3. Google Photos on how it chooses the best photo while also fixing smiles in photos (technology available only on Google Pixel.)

The GANs and heuristic approaches to this project were discussed:

1. Using a heuristic approach, we would need a way to find key points and a scoring system. But also, we would need to maintain a list of the best features for a particular person so that we can stitch a better image if necessary.
2. Using a GANs approach we would need to train an ML model to identify the best features. The GANs can then stitch the best image for us using the training data. We can train different models for different people to use GANs more efficiently and make better images.

Tasks before the next meeting:

1. Decide on whether to use a heuristic or GANs based approach 2. Try reverse engineering already existing technology (Snapchat, Adobe Photoshop, etc.).
3. Our client gave us a dataset of wedding photos taken by photographers. He asked us to browse through them and try to find patterns to train ML models on.
4. Read about some technology that could help us in the process like, PyTorch, PiPNet, YOLO, etc.