NOKIA

DiVRsifying Egocentric Segmentation of Video-Based Self-Avatars

At Nokia eXtended Reality Lab, we have developed a deep learning algorithm able to segment human body parts from egocentric videos in real time. This algorithm is already integrated in several eXtended Reality / Mixed Reality applications, as the one you can see in this video. This algorithm has been trained with a dataset composed of images from different people, with some degree of gender and skin color variability. However, there are known cases where algorithms do not work equally well for specific groups. We believe we can create an even more inclusive algorithm, so that any person can be sufficiently represented in the dataset, independently of their age, height, weight, clothes style, appearance, skin color, physical disability, among others. Aiming to reduce the bias from insufficiently diverse data, we plan for this internship:

- Actively search people with a predefined profile, establish formal conversations with companies in charge of user recruitement and with some institutions.
- Supervision of the new dataset capture as well as monitoring ground truth creation
- Training of the algorithm with the new dataset and validate the algorithm both quantitative and qualitative using an inclusive population.

Conditions

- 20 hours / week (flexible arrangement and remote working)
- Salary: 750 €/month
- Minimum duration 6 months (optional extension up to 12 months)
- Expected starting time: September 2022
- Location: Nokia Spain (Las Tablas), María Tubau 9, Madrid

Requirements

- Students at finishing their BsC or MsC studies related to Computer Science, Electrical Engineering, or related.
- Python and some knowledge about deep learning and image processing are desirable
- Social skills
- Good English level and academic marks, self-management, and critical thinking

Contact

If you think you can contribute in this path towards inclusiveness, please send your CV, mark records and motivation letter to pablo.perez@nokia.com as soon as possible. The expected starting time is mid September 2022