Using 3D headphone to locate objects from static image using computer vision.
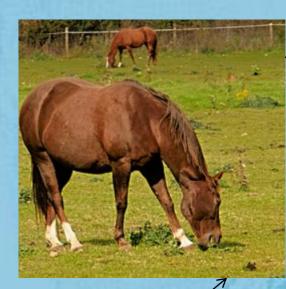
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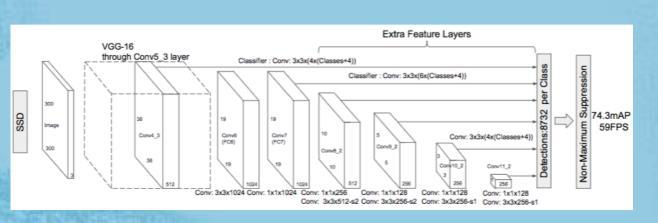UNIVERSITY *of*
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Aim

The aim of the project is to combine two technologies, 3D sound and computer vision to help visually impaired people. Through deep learning algorithm object is detected in a static image and a 3D sound is created from the object location so the person can locate it.

horse: 61%

horse: 99%

Technology Used

- Computer Vision: SSD mobile net is used for object detection
- 3D Sound:To create 3D sound, python library openal.audio is used and 3D headphones are used to listen to it.

Process

- A static image is passed through computer vision algorithm and objects are detected.
- Coordinates of the object detected are passed to create 3D sound.
- The 3D sound is captured by a person who is wearing 3D headphone and sound is coming from the detected object.

Future Work

A visually impaired person wearing the 3D headphone headset, with camera on it, can detect real time objects. The headset will be connected to cloud which can detect object and 3D sound will be created that appears to be coming from the object location.

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