

COMPUTER VISION LAB ASSIGNMENT 1

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Q1. Top five journals and conferences (related to computer vision)

Journals:

- International Journal of Computer Vision (IJCV)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- Journal of Machine Vision and Applications (MVA)
- Computer Vision and Image Understanding (CVIU)
- Pattern Recognition (PR)

Conferences:

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
- International Conference on Computer Vision (ICCV)
- European Conference on Computer Vision (ECCV)
- Asian Conference on Computer Vision (ACCV)
- British Machine Vision Conference (BMVC)

Q2. Top 5 companies working on computer vision and their top research and products.

Google: Google has been a leader in the field of computer vision, with products like Google Photos, which uses image recognition to identify and categorize photos, and Google Lens, which uses image recognition to provide information about objects it identifies through the camera. Google's research in computer vision is extensive, with numerous publications in top-tier conferences and journals.

Facebook (Meta Platforms): Facebook uses computer vision in various ways, including image and video analysis for content moderation, and facial recognition for tagging photos. Facebook's AI Research (FAIR) group is also very active in computer vision research.

Microsoft: Microsoft uses computer vision in products like the Azure Computer Vision API, which developers can use to incorporate image recognition capabilities into their own applications. Microsoft Research is also a leader in computer vision research.

Amazon: Amazon uses computer vision in its Amazon Go stores, which use computer vision to automatically track and bill for items that customers take from the shelves. Amazon's research division also publishes work on computer vision.

Apple: Apple uses computer vision in various products, including the iPhone (for features like Face ID and Animoji) and in its Photos app for image recognition and categorization. Apple's research division is somewhat more secretive than others, but they do publish some work on computer vision.

Q. Top 5 universities doing research in computer vision and the problems on which they are working

Stanford University: Stanford has a strong computer vision group that works on a variety of problems, including 3D reconstruction, object recognition, and machine learning for computer vision.

Massachusetts Institute of Technology (MIT): MIT's Computer Science and Artificial Intelligence Laboratory (CSAIL) has a number of researchers working on computer vision, with projects in areas like scene understanding, object recognition, and video analysis.

University of California, Berkeley: Berkeley's computer vision group is known for its work on deep learning for computer vision, semantic segmentation, and activity recognition.

Carnegie Mellon University (CMU): CMU's Robotics Institute has a long history of work in computer vision, with research in areas like 3D vision, object recognition, and image-based modeling.

University of Oxford: The Visual Geometry Group at Oxford works on a variety of computer vision problems, including object recognition, image retrieval, and scene understanding.