

PUNE INSTITUTE OF COMPUTER TECHNOLOGY
DHANKAWADI, PUNE – 43

UG SEMINAR ABSTRACT
Academic Year: 2019-20

DEPARTMENT: COMPUTER ENGINEERING

Seminar On: Face Recognition – Embedding and Similarity Search Algorithms

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1. Name of The Topic: Similarity Search Algorithms on Embeddings in Face Recognition

2. Topic wise contents: 1.Introduction
2.Literature Survey
3.Face Embedding
4.Similarity Search Algorithms
5.Analysis and Benchmark
6.Conclusion

3. References Used:

1. M. Aumüller, E. Bernhardsson and A. Faithfull, “ANN-Benchmarks: A Benchmarking Tool for Approximate Nearest Neighbor Algorithms.” Information Systems, 2019.
2. F. Schroff, D. Kalenichenko and J. Philbin, “FaceNet: A Unified Embedding for Face Recognition and Clustering”, 2015.
3. L. Tran, X. Yin, and X. Liu, “Disentangled representation learning GAN for pose-invariant face recognition,” in IEEE Conference on Computer Vision and Pattern Recognition, 2017.
4. Q. Cao, L. Shen, W. Xie, O. M. Parkhi and A. Zisserman, “Vggface2: A dataset for recognising faces across pose and age”, 2017.
5. Y. Wang, A. Shrivastava, J. Wang and J. Ryu, “Randomized algorithms accelerated over CPU-GPU for ultra-high dimensional similarity search”, In SIGMOD. pp. 889–903, 2018.
6. J. Johnson, M. Douze and H. Jégou, “Billion-scale similarity search with gpus”, 2017.

Date:

Student

REMARKS BY UG SEMINAR CO-ORDINATOR:

Date:

UG Seminar Coordinator

Abstract:. Face Recognition is a challenging task in computer vision in which researchers from all over the world have made great strides owing to the development of more robust and accurate deep learning models. These frameworks have come a long way from hand engineered systems to the end-to-end mapped models that are state of the art today. However, implementing faster similarity search of face features is an increasingly important problem. There is a dire need to address this issue in order to make the face recognition pipelines scalable and more suited for real time applications. This seminar aims to benchmark different similarity search algorithms on face embeddings generated from a standard face dataset. The benchmarking will help other users choose a nearest neighbour search method for their face recognition models.

Keywords: face recognition, computer vision, deep learning model, nearest neighbour Search, embeddings, similarity search ,benchmark.

REMARKS BY UG SEMINAR GUIDE:

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(Prof.)