

Dr. Vishwanath Karad MIT-World Peace University (MIT-WPU) Faculty of Engineering & Technology

School of Computer Science and Engineering T.Y.B.Tech.CSE/AIDS/CSF

T.Y. Semester-VI (23-24) Seminar Synopsis

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| **Name of Student** | Krishnaraj Thadesar |
| **PRN No.** | 1032210888 |
| **Roll No.** | PA10 |
| **Panel No.** | A |
| **Date** | February 20, 2024 |
| **Topic** | Comparison between Face Recognition Algorithms and Techniques |
| **Abstract (one paragraph of 200-300 words)** | My seminar is about comparing different ways of recognizing faces using computers. We’ll look at both old and new methods. Some old ones, like Eigenfaces and Fisherfaces, use math to find face features. Then there are newer methods like DeepFace, FaceNet, and ArcFace that use deep learning and complex networks to do the job. We’ll dig into each method’s pros and cons – how well they work, if they handle different lighting and face angles, how fast they are, and if they can handle a lot of data. I’ll also talk about some newer ideas like Siamese Networks and Triplet Loss, plus a lightweight method called LightCNN. The goal is to help people understand these techniques and pick the right one for their needs, whether they’re researchers, developers, or just curious about where face recognition is headed. This topic is related to my Mini project, which is Attendence via Face Recognition in Every class. So research pertaining to it crucial for me to decide which algorithm I have to implement. |
| **Keywords (3-5 words)** | Machine learning, Artificial Intelligence, Face Recognition, Deep Learning |
| **References (05-07**  **Research papers in IEEE format)** | 1. Paul, Sanmoy and Acharya, Sameer Kumar, A Comparative Study on Facial Recognition Algorithms (December 21, 2020). e-journal - First Pan IIT International Management Conference – 2018, Available at SSRN: https://ssrn.com/abstract=3753064 or <http://dx.doi.org/10.2139/ssrn.3753064> 2. Kaur, P., Krishan, K., Sharma, S.K. and Kanchan, T., 2020. Facial-recognition algorithms: A literature review. Medicine, Science and the Law, 60(2), pp.131-139. 3. Kaur, P., Krishan, K., Sharma, S.K. and Kanchan, T., 2020. Facial-recognition algorithms: A literature review. Medicine, Science and the Law, 60(2), pp.131-139. 4. Kaur, P., Krishan, K., Sharma, S.K. and Kanchan, T., 2020. Facial-recognition algorithms: A literature review. Medicine, Science and the Law, 60(2), pp.131-139. 5. Kukula EP, Elliott SJ. Evaluation of a facial recognition algorithm across three illumination conditions. IEEE Aerospace and Electronic Systems Magazine. 2004 Sep;19(9):19-23. |
|  | 1. Kukula EP, Elliott SJ. Evaluation of a facial recognition algorithm across three illumination conditions. IEEE Aerospace and Electronic Systems Magazine. 2004 Sep;19(9):19-23. 2. Emami S, Suciu VP. Facial recognition using OpenCV. Journal of Mobile, Embedded and Distributed Systems. 2012 Mar 30;4(1):38-43. 3. Chen J, Jenkins WK. Facial recognition with PCA and machine learning methods. In2017 IEEE 60th international Midwest symposium on circuits and systems (MWSCAS) 2017 Aug 6 (pp. 973-976). IEEE. |

Seminar Guide Name Seminar Coordinator Name (Sign with date) (Sign with date)