#### UG SEMINAR ABSTRACT

#### Academic Year: 2024-2025

**DEPARTMENT: IT**

Seminar On **Machine Learning-Based Cursor Control Using Eye Movements**

By Sahil Sanjay Katkamwar Roll No. 33331

1. Name of the Topic: Machine Learning-Based Cursor Control Using Eye Movements

2. Topic wise contents:

* Overview of cursor control methods
* Introduction to eye movement-based control
* Types of eye movements
* Challenges in tracking eye movements
* Data collection and preprocessing
* Learning approaches
* Technical challenges
* Applications and Use Cases
* Future trends

3. References Used:

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2. Scott A. Stone and Craig S. Chapman. 2023. Unconscious Frustration: Dynamically Assessing User Experience using Eye and Mouse Tracking. Proc. ACM Hum.-Comput. Interact. 7, ETRA, Article 168 (May 2023), 17 pages. <https://doi.org/10.1145/3591137>
3. M. S., S. Nirmal, and L. S. Kala, "Eye-Controlled Mouse Cursor," *International Journal of Engineering Technology and Management Sciences*, vol. 7, no. 3, pp. 1-6, May-Jun. 2023, doi: 10.46647/ijetms.2023.v07i03.051.
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5. J. Alberto Álvarez Martín, Henrik Gollee, Jörg Müller, and Roderick Murray-Smith. 2021. Intermittent Control as a ModelofMouseMovements. ACMTrans.Comput.-Hum.Interact. 28, 5, Article 35 (August 2021), 46 pages. <https://doi.org/10.1145/3461836>
6. MichalHucko,RobertMoro,andMariaBielikova.2020.ConfusionDetection Dataset of Mouse and Eye Movements. In 28th ACM Conference on User Modeling, Adaptation and Personalization (UMAP ’20 Adjunct), July 14–17, 2020, Genoa, Italy. ACM, New York, NY, USA, 6 pages. [https://doi.org/10. 1145/3386392.3399289](https://doi.org/10.%201145/3386392.3399289)
7. V. Shah, P. Punde, S. Dubey, and B. Sonawane, "Mouse Pointer Control Using Eye Movements," *JETIR*, vol. 6, no. 4, pp. 1-6, Apr. 2019.

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REMARKS BY UG SEMINAR CO-ORDINATOR:

Date: \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

UG Seminar Coordinator