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INSTITUTE OF PROFESSIONAL STUDIES

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Department of Artificial Intelligence and Data Science

“Utkarsh-2024”

Technical Exhibition

Projects Details

Sr. No.	Project Name	Students Name	Year	Date
1	FemineSync- Break The Taboo	Hardik Sharma Ansh Varshney Sahil Gupta	3rd year	15.03.24
2	CanvasAI-Draw With Hand Gestures	Nandini Singh Jatin Singh	3rd year	15.03.24
3	Driver Drowsiness Detection System	Subham Singla Anurag Kumar Jha Ayushmaan Kamboj	3rd year	15.03.24
4	Inventory Management And Performance Automation Control Tool (IMPACT)	Mayank Garg Jyoti Rana	1st year 2nd year	15.03.24

FemineSync- Break The Taboo

Hardik Sharma(35215611921/T-13) , Ansh Varshney(03215611921/T-13)
Sahil Gupta(35315611921/T-13)

Overview: FemineSync, is a groundbreaking initiative dedicated to revolutionizing conversations surrounding menstrual health and periods. In a world where the menstrual cycle is often shrouded in stigma and silence, Feminesync emerges as a beacon of empowerment and education. For far too long, menstruation has been a taboo topic, relegated to hushed tones and hidden away from public discourse. Yet, the menstrual cycle is a natural and integral aspect of the female experience, affecting individuals across the globe in profound ways. From adolescence to menopause, the menstrual journey is a complex interplay of physiological changes, emotional fluctuations, and societal influences. Feminesync seeks to dismantle the barriers of shame and misinformation that surround menstruation. The platform provides a safe and inclusive space for individuals of all genders to engage in open dialogue, gain knowledge, and foster a deeper understanding of menstrual health. Through a combination of advocacy, education, and community-building,

FemineSync strives to:

Destigmatize Menstruation: By fostering open conversations and challenging societal norms, we aim to normalize discussions about menstruation and eradicate the shame associated with it.

Promote Education: We believe that knowledge is power. Feminesync offers comprehensive resources and evidence-based information to empower individuals to make informed decisions about their menstrual health.

Advance Menstrual Equity: Recognizing the disparities in access to menstrual products and healthcare, we advocate for policies and initiatives that promote menstrual equity and ensure that everyone has access to the resources they need.

Celebrate Diversity: Celebrate the diversity of menstrual experiences across cultures, ages, and identities. Feminesync embraces intersectionality and amplifies the voices of marginalized communities within the menstrual health movement.

Foster Supportive Communities: Through online forums, support groups, and events, Feminesync facilitates connections and fosters a sense of solidarity among individuals navigating their menstrual journeys.

CanvasAI - Drawing with Hand Gestures

Nandini Singh (03815611921/T-13), Jatin Singh (02115611921/T-13)

Introduction:

CanvasAI is a computer vision project aimed at providing an innovative platform for creative expression through gesture-based drawing. Utilizing the capabilities of OpenCV and machine learning via Mediapipe, CanvasAI detects and tracks hand landmarks, enabling users to draw in the air with hand gestures. This report outlines the objectives, implementation details, outcomes, and future scope of the CanvasAI project.

Objectives:

- The primary objectives of CanvasAI are as follows:
- Develop a system for gesture-based drawing using hand gestures.
- Provide an interactive canvas where users can draw using different colors.
- Implement functionalities for clearing the canvas and selecting colors.
- Create a user-friendly interface for intuitive interaction.

Results and Output:

CanvasAI successfully provides a real-time demonstration of gesture-based drawing, allowing users to express their creativity by drawing in the air. Users can choose from a variety of colors, clear the canvas, and enjoy an interactive drawing experience.

Conclusion:

CanvasAI represents an innovative approach to digital drawing, leveraging computer vision and machine learning technologies. The project demonstrates the feasibility of gesture-based interaction for creative applications and opens avenues for future research and development in this domain.

Driver Drowsiness Detection System with alarm using OpenCv and Deep Learning

Shubham Singla(02215611921/T-13) , Anurag Kumar Jha(01615611921/T-13)
Ayushmaan Kamboj(00815611921/T-13)

"Driver Drowsiness Detection System" is a comprehensive project aimed at enhancing road safety by leveraging cutting-edge technology. Our system employs state-of-the-art computer vision and machine learning techniques to detect signs of driver drowsiness in real time, thus preventing potential accidents caused by driver fatigue.

For training purposes, we used a vast image dataset {MRL}, i.e. Media Research Lab dataset which contains more than 60,000 images of eyes divided into two main categories (open/closed). After training the model by applying various neural network layers and activation functions, we saved the model by name (model.h5) checkpoint where it was giving the maximum accuracy (94% approx.) at around 10 epochs. After the model had been created, we also made a separate GUI for visualization purposes and exhibition. In the GUI, once we run the code, a tkinter window appears with the camera on and recording the face especially focusing on the eyes. Once the person in front of the camera slightly shuts his/her eyes off for a few seconds (threshold value of around 3-4 seconds), the camera will detect it and the screen will show a red text saying "Eyes are closed" with an alarm buzzing off for a few seconds. For closing the GUI, directly pressing "E" will close the Tkinter window.

Inventory Management and Performance Automation Control Tool (IMPACT)

MAYANK GARG (005115611923/1st Yr. -M), Jyoti Rana (05415611922/S-11)

The project aims to develop an advanced **Inventory Management and Performance Automation Control Tool** to streamline inventory tracking, management, and performance monitoring processes for businesses. This project involves adapting digital bill-making, due management, low system requirements and no high education requirement.

IMPACT offers a range of features that cater to the needs of small businesses or individuals, providing a user-friendly, cost-effective, and versatile solution for managing digital billing, inventory, and credit transactions.

Glimpses of Technical Exhibitions





