DEEPAK KUMAR N

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TECHNICAL SKILLS:

- **PYTHON PROGRAMMING –** Core Python, Basic Scripting, Hands-on Experience with Computer Vision (via ML project), Exploratory Data Analysis.
- **WEB DEVELOPMENT –** HTML, CSS, JavaScript, Front-End Design, Git & GitHub, Responsive Layouts.
- **MACHINE LEARNING & COMPUTER VISION –** Hand Gesture Recognition, Virtual Painting System, Self-taught model implementation for interactive systems.

PROJECT EXPERIENCE:

Virtual Painting – [Python | MediaPipe | TensorFlow] Virtual Painting   **Dec 2024**

a real-time virtual painting system using hand gesture recognition powered by MediaPipe and TensorFlow.

- Enabled gesture-controlled drawing, brush color switching, and screen clearing with custom ML-based gesture classification.
- Built an interactive UI with zero physical input, enhancing accessibility and creativity through computer vision.
- Presented at **ICA5NT 2024**, earning the **Best Paper Award** for innovation in gesture-based interfaces.

3D Environment Creation – [Three.js | MediaPipe | JavaScript] 3D Environment-Creation   **Mar 2025**

- Designed a browser-based 3D world with **permanent land and sky**, supporting real-time object creation using **hand gestures**.
- Implemented **gesture-based selection and placement** of 3D objects (trees, houses, cubes, birds, etc.) using **MediaPipe** hand tracking.
- Developed a modular UI in **Three.js**, enabling gesture-driven interactions like dragging and dropping objects in a spatial environment.
- Integrated gesture recognition to control scene dynamics without mouse or keyboard input, simulating a real-world building experience.

Multiplayer Game – [JavaScript | MediaPipe | HTML/CSS] MultiPlayer Game   **April 2025**

- Created a **gesture-controlled multiplayer game** using **MediaPipe** for real-time hand tracking and **JavaScript** for game logic.
- Enabled players to navigate and interact within the game using gestures such as finger pointing, open palm, and fist.
- Designed a clean and responsive game interface with **HTML/CSS**, focusing on intuitive gesture-based input instead of physical devices.
- Implemented multiplayer features through shared screen interactions, enhancing collaborative gameplay without network communication.

EDUCATION:

Bachelor of Computer Application(AI) | B.S. Abdur Rahman Crescent Institute, Chennai | Jun 2025| CGPA – 7.83

CERTIFICATIONS / AWARDS:

- Front-End Development Internship – **AICTE & Edunet Foundation (IBM SkillsBuild)**
- Best Paper Award – **ICA5NT 2024** for *"Virtual Painting through Hand Gestures: A Machine Learning Approach"*
- Python 3.4.3 Training – **Spoken Tutorial Project, IIT Bombay** (Score: 80%)