**Project Abstract**

**Project Title**

Air Canvas

**Abstract**

It is a digital drawing interface that allows users to draw in the air using hand gestures, typically captured by a camera and processed using computer vision techniques. This interface can be implemented using libraries such as OpenCV, a powerful open-source computer vision and machine learning software library. The concept leverages real-time hand tracking, gesture recognition, and augmented reality to create an interactive and immersive drawing experience without the need for physical drawing tools.

The Key components are:

* **Hand Tracking**
* **Guesture Recogniation**
* **Drawing Mechanism**
* **User Interface and Interaction**

**Technologies Used**

### Frontend

* **Technology Name:** HTML/CSS/JavaScript  
  **Purpose:** To create the user interface for the Chrome extension, allowing users to interact with AIR CANVA directly from their browser.

### Backend

* **Technology Name:** Python, OpenCV  
  **Purpose:** Python serves as the primary programming language, while OpenCV is utilized for implementing the core image processing functionalities. A Flask server is set up to handle requests from the Chrome extension and execute the image processing tasks.

### Other Technologies

* **Technology Name:** Flask  
  **Purpose:** Flask is used to create a web server that interfaces between the Chrome extension and the backend Python scripts, allowing for the execution of image processing tasks initiated from the extension.
* **Technology Name:** Chrome Extension APIs  
  **Purpose:** To develop and integrate the Chrome extension, enabling users to access AIR CANVA functionalities directly within their browser. The APIs facilitate communication between the extension's frontend and the Flask server.

**Team Members and Roles**

**Team Member 1**

**NAME:** Shamanth TS[1RVU23LCSE006].

**ROLE:** Backend developer.

**Team Member 2**

**NAME:** Chandan Gowda G[1RVU22CSE040].

**ROLE:** Frontend Developer.