College of Engineering Chengannur
Department of Computer Engineering
03CS6902 Mini Project
Abstract of Project Proposed
AIR CANVAS

CHN20MTO13, CHN20CSIP06, SHIVANGI M, meshivu97@gmail.com

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Abstract

The project is a "AIR CANVAS" that intends to identify the characters written in air using our finger.It is a real time video based pointing method which allows sketching and writing of English text over air in front of camera.

The initial motivation was a need for a dustless class room for the students to study in. I know that there are many ways like touch screens and more but what about the schools which can't afford it to buy such huge large screens and teach on them like a T.V. So, I thought why not can a finger be tracked, but that too at a initial level without deep learning. The main steps are Understanding the HSV (Hue, Saturation, Value) color space for Color Tracking. And tracking the small colored object at finger tip.Detecting the Position of Colored object at finger top and forming a circle over it. That is Contour Detection. Tracking the fingertip and drawing points at each position for air canvas effect. That is Frame Processing. Fixing the Minor Details of the code to function the program smoothly. Algorithmic Optimization.

Features of the Air canvas: Can track any specific colored pointer . User can draw in four different colors and even change them without any hussle. Able to rub the board with a single location at the top of the screen. No need to touch the computer once the program is run.

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Decision: