XFRAME Design Doc

Overview

An opensource platform for all things Image processing and Computer Vision. Beginning as a medium for demonstration of different image processing techniques, shall expand to enhancement and generation aspects to the extent to become a full creative suit.

Purpose

Acts as an ultimate destination for image processing and CV tasks for people, to either just observe and understand image related phenomena, to tinker with different processing effects and as a marketplace to create and trade creative works. The platform intends to bring users, creators and contributors(those who build and integrate modules on the platform) on a single playground to work together for faster and effective and transformative work.

Target Audience

Intended for educators, students and creatives. Academic, Industrial as well as personal works shall all be catered through it.

Founding principles

The opensource aspect of it shall never be sacrificed for any other intention. As the platform serves as an approachable arena for young talents in AI, CS and allied fields to produce useful programs to showcase their acumen and reach and help people directly.

All elements developed on it shall remain accessible for general public free of cost, exceptions only to extra functionalities which can be paid but never base features.

Any creative or technological material integrated, used or generated through the platform shall always be duly respected and credited. All and any contentions regarding copyright shall be solved and any financial gains shall be appropriately distributed.

The platform will be built and operate for just causes such as to preserve dignity of creatives by accounting of proper credit, economics and fair use; help students and teachers to access free of cost demonstrative materials for their learning and as an ever open place for anyone to share their ideas in the field by integrating their proposed programs without hassles and compulsions.

Feature Scope

* Image processing- filters, transformations, enhancement, restoration
* Chat system for assistance, explanation and integrated workflow
* Generation- Text/Image to Image/Video/3D model/3D Render/Animation
* Seamless input through direct copy-paste, URL, Upload
* Direct output linking to comprehensive creative workspaces including image manipulation software, AI models, text editors and IDEs
* Development in order of implementation feasibility

Structure

Presentation layer, Social Layer, Interaction layer, Depth layer [ideation, optimization, integration, operation]

Presentation

Interaction

Social

Depth

Architecture

AI front, Data front, Net front, Cross creative front

Languages- Python, C++, JS

Frameworks- TensorFlow, PyTorch,

Version Control and contribution space

Databases

Network Services