New Applications & Current Trends in Computer Vision

CSC4082 - Computer Vision
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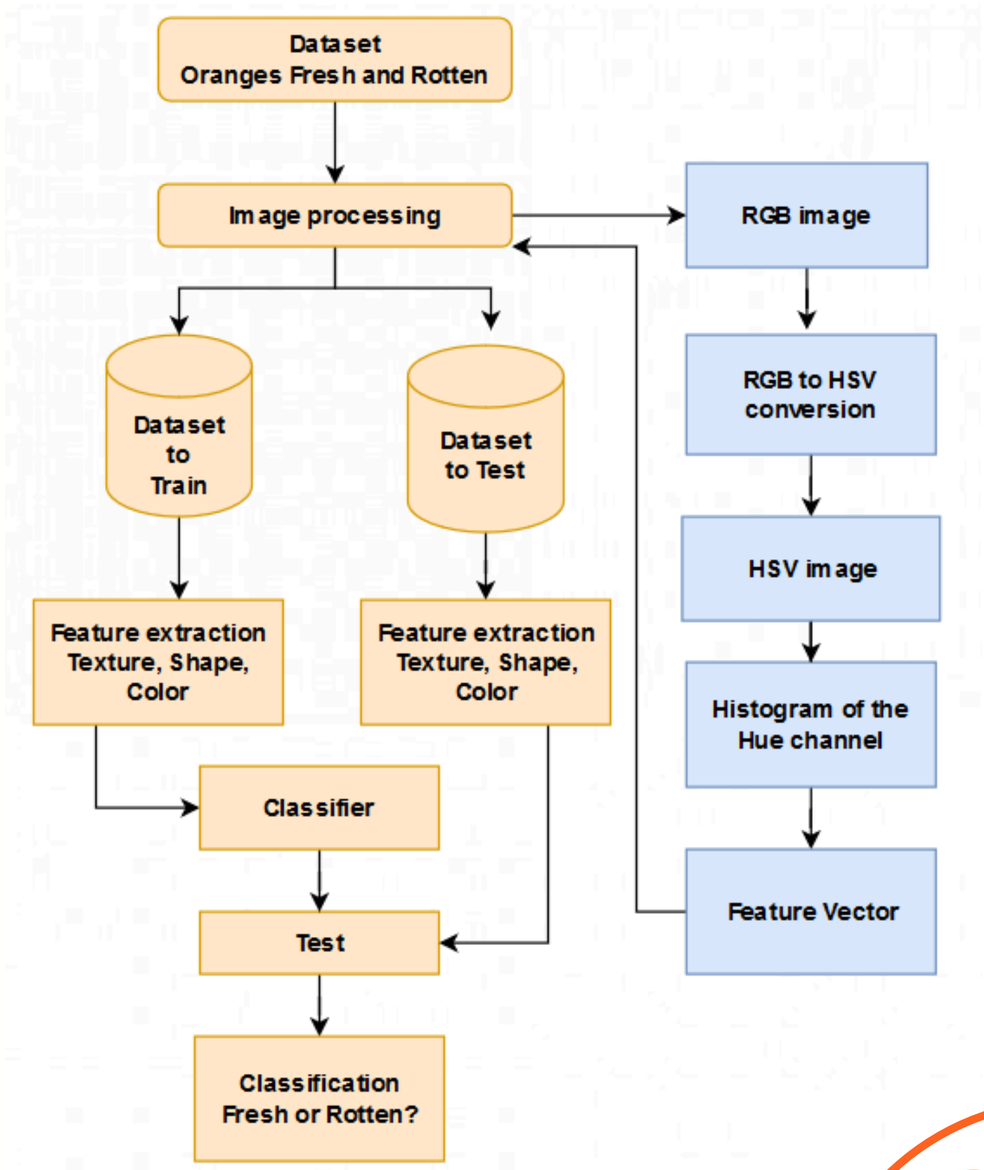
What is Computer Vision & Why?

Computer Vision is a type of Artificial Intelligence that allows computers to process visual information and make decisions.

Computer Vision enables automation in various industries, improves safety measures, and enhances decision-making by extracting valuable insights from visual data.



Current Top Trends

Some of the biggest trends in computer vision are,

Merged Reality

Merged reality (MR) is a technology that blends the physical world with virtual reality.

Edge Computing

Edge computing allows for data processing to occur at the edge of a network, rather than in the cloud or a data center.

Generative AI

Generative AI (GenAI) is a type of artificial intelligence (AI) that can create new content like text, images, videos, and music.

Facial Recognision

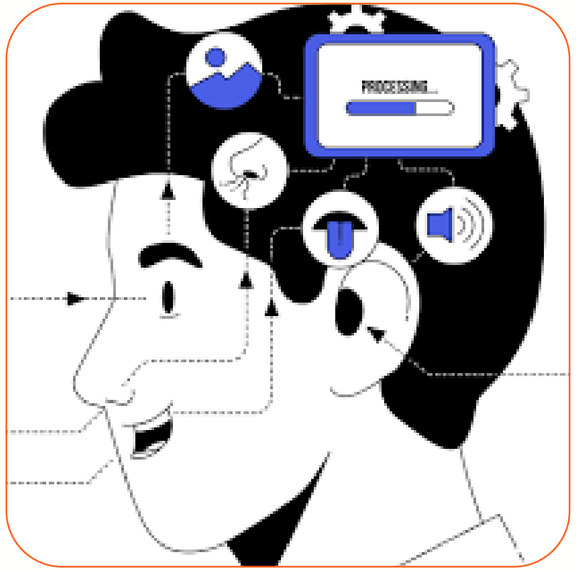
Facial recognition is a technology that identifies a person's face from a digital image or video.

New Applications

Facial Recognition

Identifies or verifies individuals based on facial features using deep learning and pattern recognition.
High accuracy in biometric authentication, but faces ethical concerns over privacy and bias.

Emotion-Adaptive AI Assistants



Read emotional cues and adjust its responses dynamically for a more human-like interaction.

Hyper-Personalized Advertising

Digital billboards will detect a person's mood, age, and interests to show tailored ads in real time.

Medical Imaging

Uses AI-powered image analysis to detect diseases from medical scans (X-rays, MRIs, CT scans). Improves diagnosis accuracy and speeds up medical decision-making, reducing human error.

Fully Automated Surgeries

CV-powered robotic surgeons will perform complex operations with ultra-precision.

Nanobot-Assisted Internal Monitoring

nanobots will visually scan internal organs for disease detection in real time.

Augmented Reality (AR)

Overlays digital content on real-world scenes using computer vision for real-time interaction. Enhances user experience by blending the virtual and real world, improving engagement and training.

Smart Stadium Experience

Enhances live sports events with real-time stats, replays, and player insights via AR glasses or smartphones.

Holographic AR Meetings

3D holograms of people in real-world spaces for realistic remote collaboration.

References

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Thank You!