PARAVISION

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Paravision Deepfake Detection

Increasing prevalence of deepfaked imagery in traditional and social media is undermining the public's understanding of what is real and what is not. In the context of digital identity, deepfakes are rapidly emerging as a threat in both selfie capture and identity document images. Identity Swap deepfake technologies are inherently well-suited to both sides of the digital identity selfie-to-ID equation, including in the case of image capture from physical identity documents. Paravision Deepfake Detection enables accurate analysis of images and video frames to assess the likelihood of image manipulation with commonly used deepfake technologies, helping companies prevent fraud and theft.

Overview

Paravision Deepfake Detection is the result of two years of focused R&D building upon the company's core expertise in face image analysis, and is cloud-ready and optimized for leading operating systems and imaging architectures. The technology outputs a deepfake likelihood score that can be used to guide automated or manual (human-in-the-loop) fraud analysis.

1. Paravision Deepfake 1.0 addresses Identity Swap and Expression Swap deepfake attacks
2. Based on a proprietary dataset of over 1 million deepfake images generated with properly-consented imagery and video representing broad racial and gender diversity
3. Trained across more than 30 model types representing 5 leading deepfake generation approaches
4. Deployable as part of Paravision's Processor Docker Container with simple API updates, enabling speedy integration for all partners

Paravision Deepfake Detection is an ideal complement to Paravision Liveness Detection: Paravision Liveness assesses the likelihood of a physical presentation attack whereas Paravision Deepfake Detection assesses the likelihood of a digital presentation attack. The combination can help ensure the authenticity of face images, building trust in a variety of remote or unattended applications.

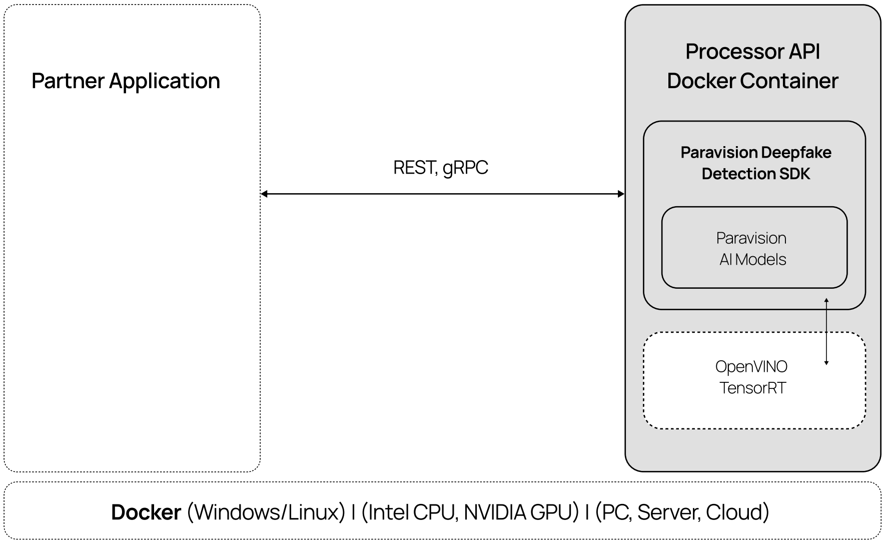
Supported Computing Environments

Paravision supports a wide range of computing environments, enabling our technology on a wide variety of platforms.

On-Premises / Private Cloud	Google Cloud Platform	Amazon Web Services	Microsoft Azure
🔒	Google Cloud	aws	Azure

NVIDIA	Intel
NVIDIA INCEPTION PROGRAM	intel partner alliance
Supported Computer Vision Framework	
TensorRT	OpenVINO

System Architecture



Technical Specifications

Deployment method	Docker container or SDK, supporting on-premise or cloud-based computing
Supported operating systems	Windows 10+, Windows Server 2019 Datacenter, Linux: Ubuntu 20.04
Supported compute platforms & computer vision frameworks	Intel CPU (OpenVINO) NVIDIA GPU (TensorRT)
Deepfake engine APIs	Docker: REST, gRPC, with Clients supporting Python, C++, C#, Node.JS, GoLang, Java, Ruby SDK: Python, C++