DEEPVISION

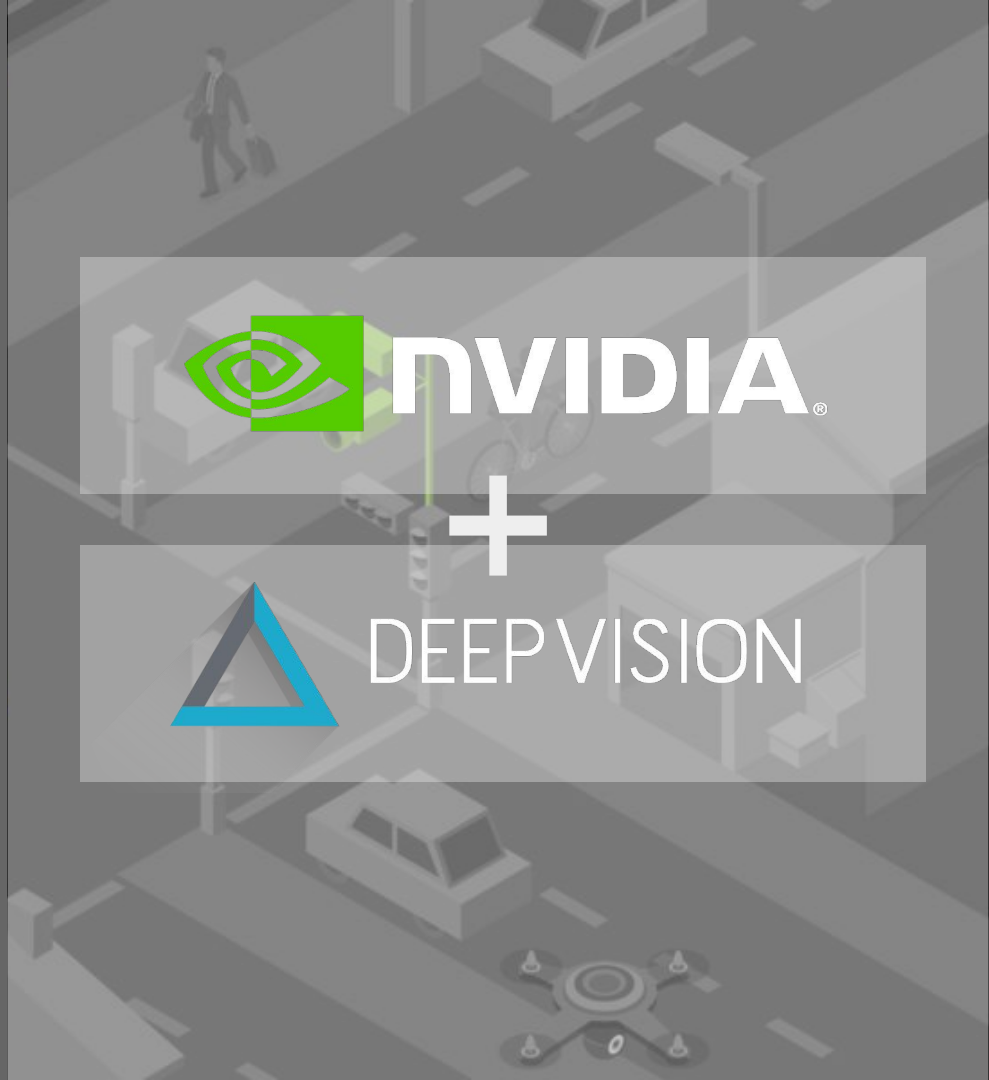
Deep learning applied to Computer Vision

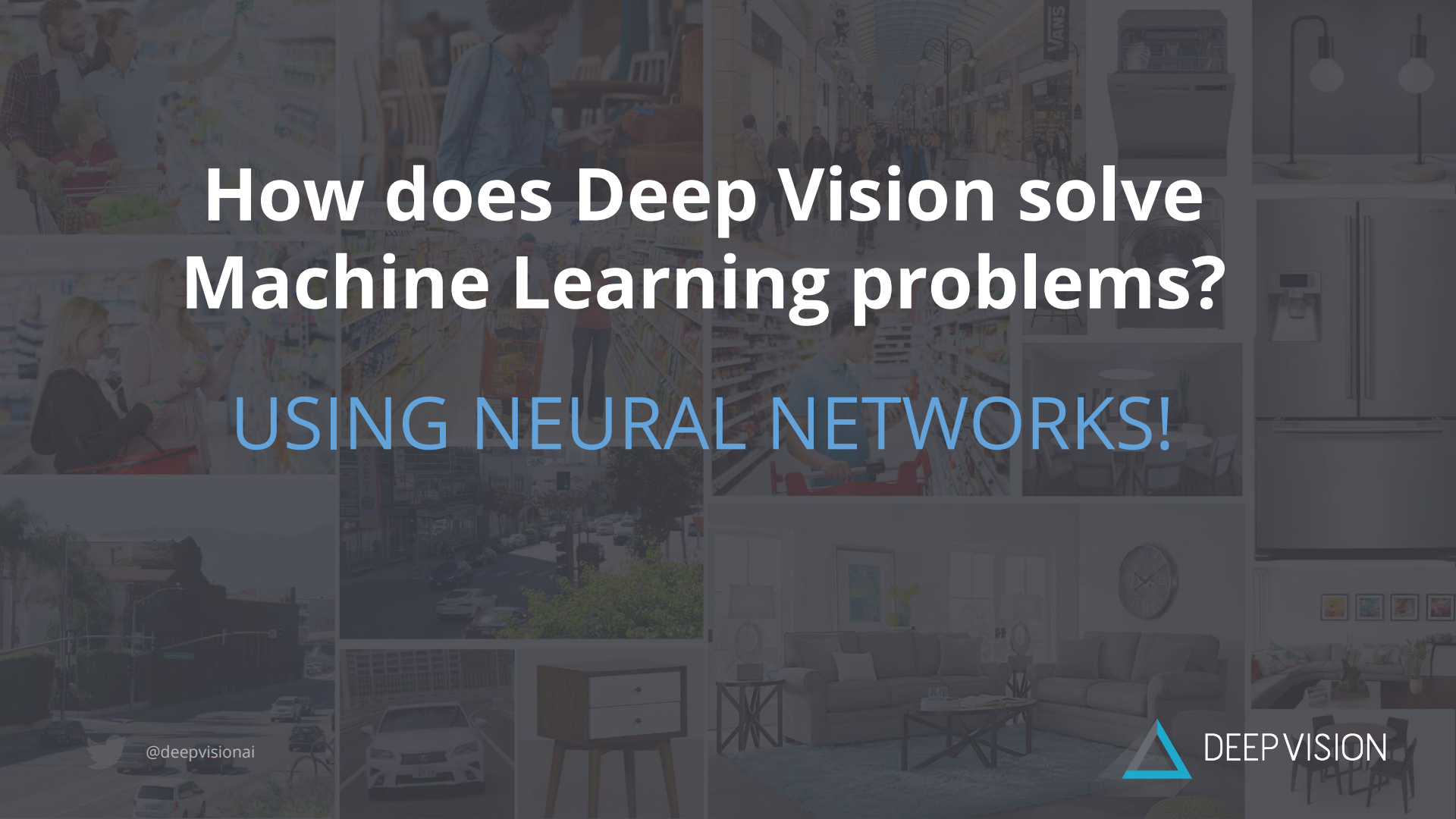
Leandro Lichtenzstein
Co-founder at **@deepvisionai**

We partnered with Nvidia to transform the Modern City

Over 500 million cameras worldwide are capturing data today, and it's growing exponentially. **Deep Vision** uses AI to understand this data to turn it into actionable insights and analytics.

DEEPVISION





How does Deep Vision solve Machine Learning problems?

USING NEURAL NETWORKS!

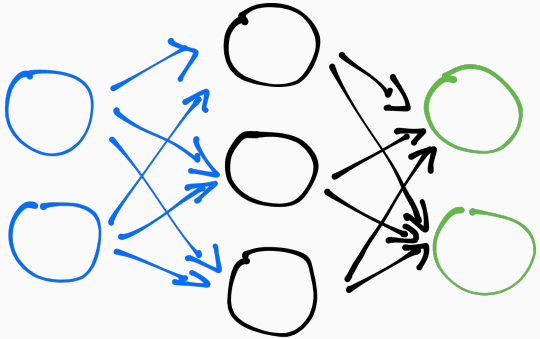
@deepvisionai

DEEPVISION

Neural Networks

DEEPVISION

Supervised learning:



NEURAL NETWORKS!

[Manzana]

[Banana]

Deep learning Introduction

DEEPVISION

The idea behind Deep Learning is simple:

“We want an end-to-end trainable machine”

Traditional Pattern Recognition:

Feature extractor → Trainable classifier

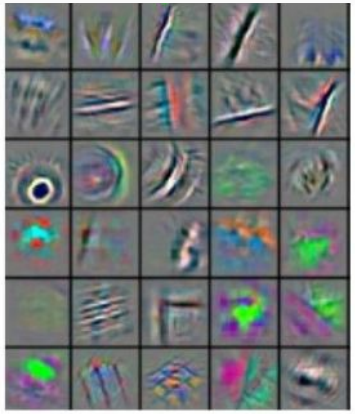
Deep learning:

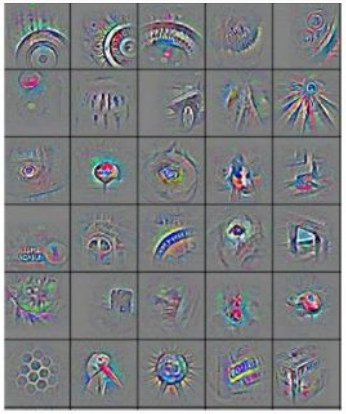
Low-level features → Mid-level features → High-level features → Trainable classifier

End-to-end learning

DEEPVISION

Low-level features → Mid-level features → High-level features → Trainable classifier

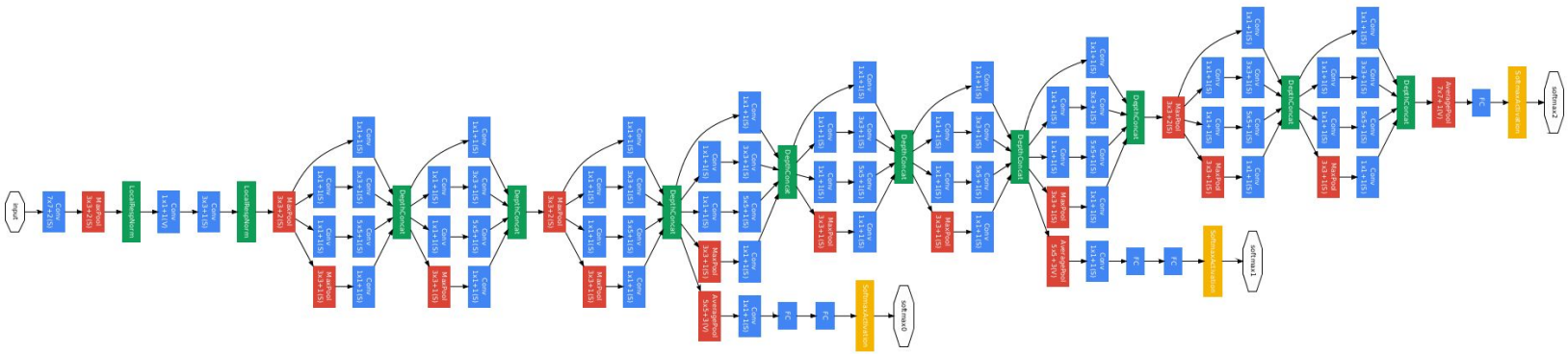




End-to-end learning

DEEPVISION

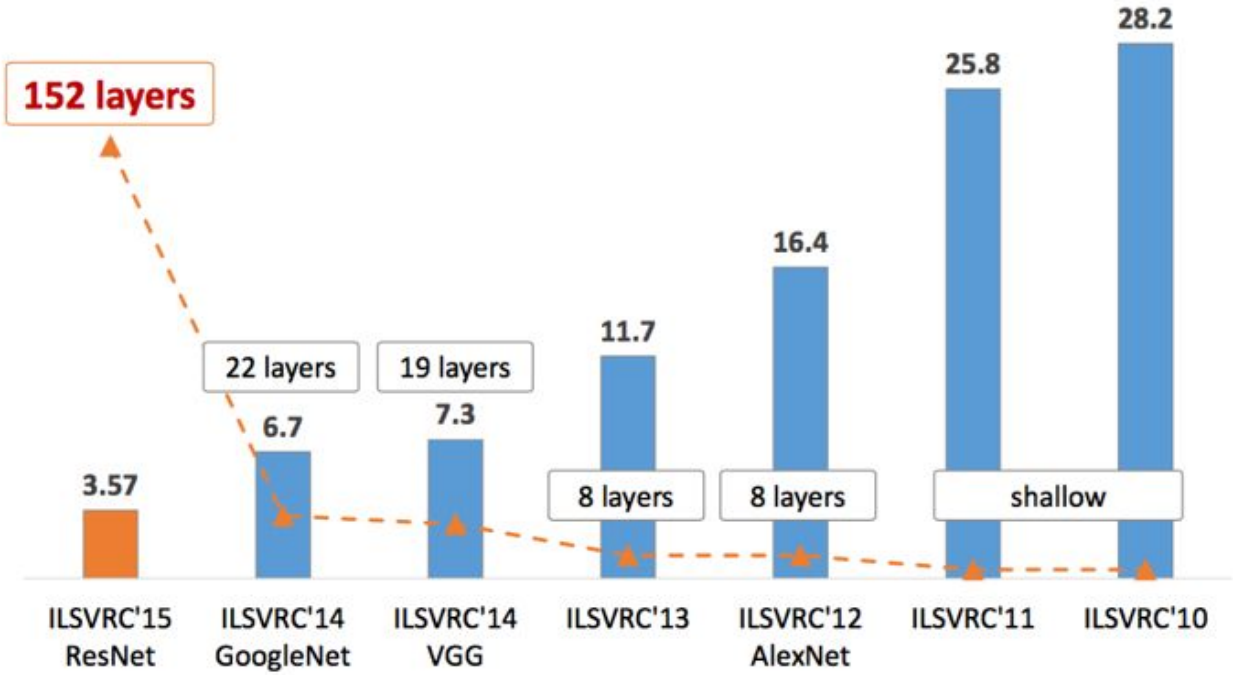
Low-level features → Mid-level features → High-level features → Trainable classifier



ImageNet challenge

DEEPVISION

Object classification challenge



Deep Vision API & Computer Vision models

@deepvisionai

DEEPVISION

Visual Search model

DEEPVISION

How it works

Returns the most visually similar objects by simply dragging any image into the system

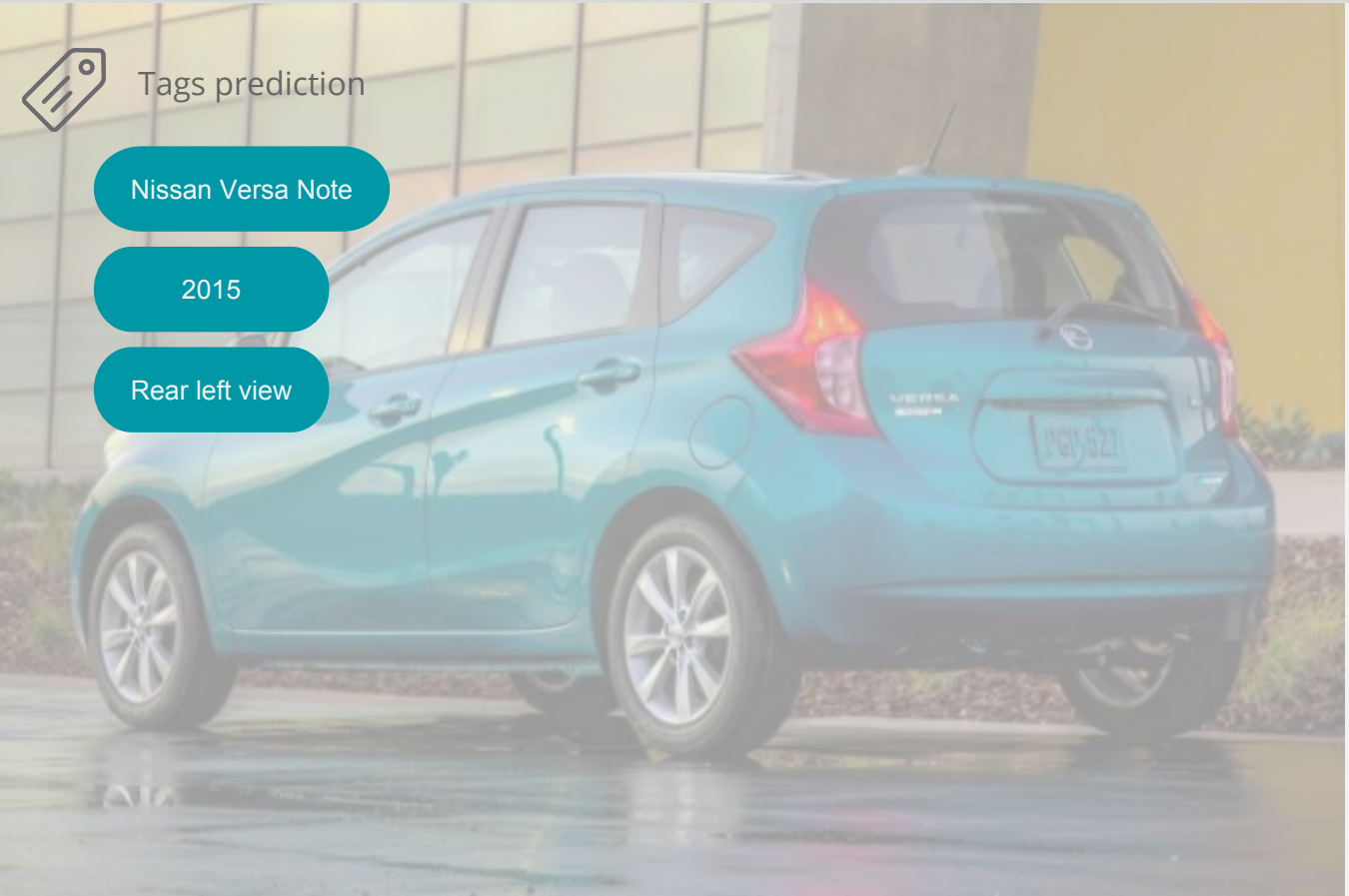
Specifications

- Add your own inventory to our search index and find the most visually similar product on your own data

Powered by Nvidia Tesla NVIDIA

Visual Vehicle model

DEEPVISION



How it works

Returns vehicle, year, make, model, and orientation by simply dragging any vehicle image into the system.

Specifications

- +1,100 vehicle year, makes, & models
- +20 interior & exterior vehicle views

Powered by Nvidia Tesla NVIDIA

Visual Brand model

DEEPVISION

How it works

Find brands appearing in any type of photo based on our logo recognition model

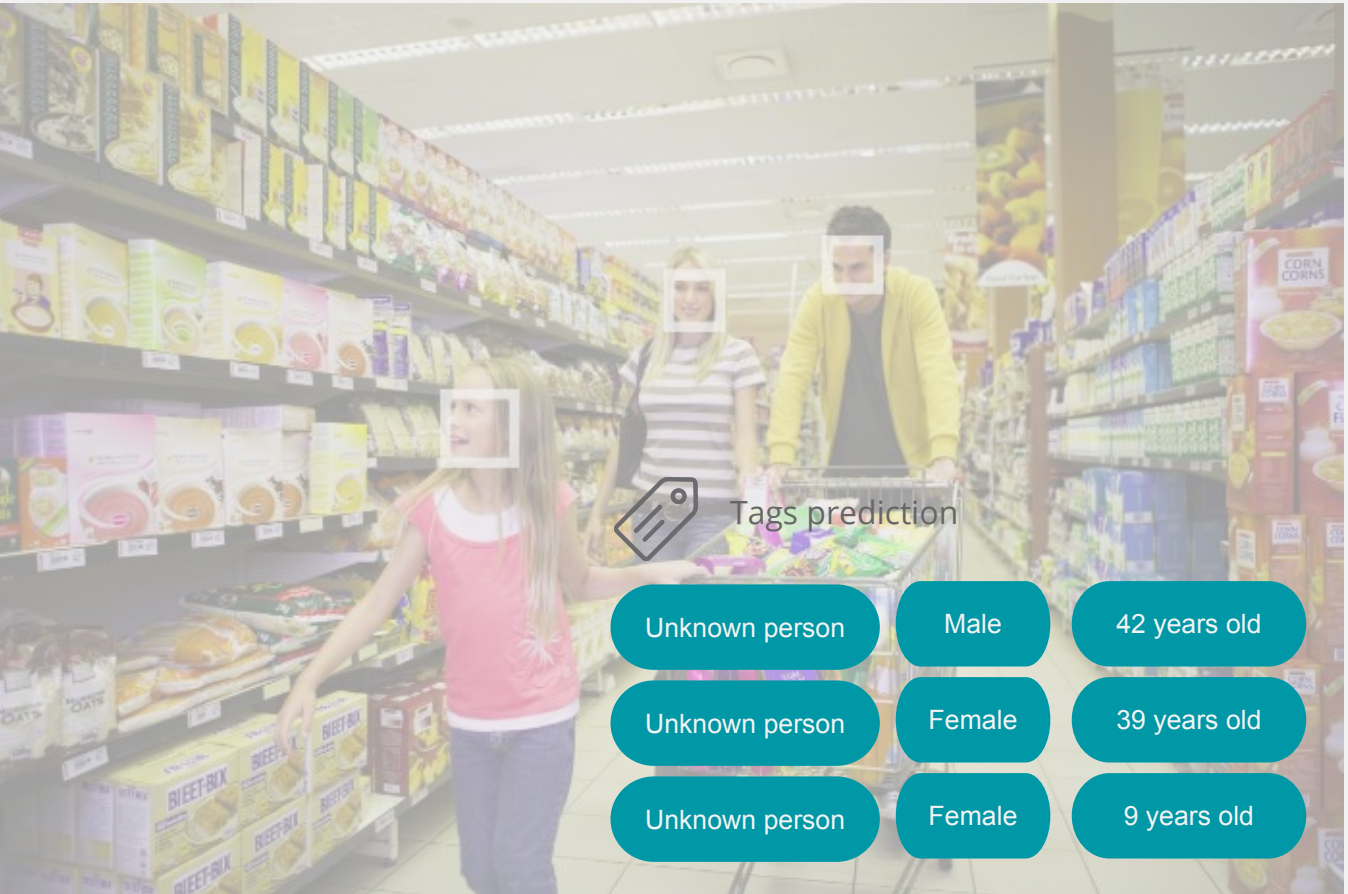
Specifications

- Brand logo recognition (Coca Cola, Starbucks, Oreo, Adidas, Budweiser, Nike, Pepsi, Heineken, Dell, Apple, Reebok, etc)
- Request your own brands

Powered by Nvidia Tesla NVIDIA

Visual Face model

DEEPVISION



How it works

Provides facial recognition including demographics and the ability to recognize them under different contexts

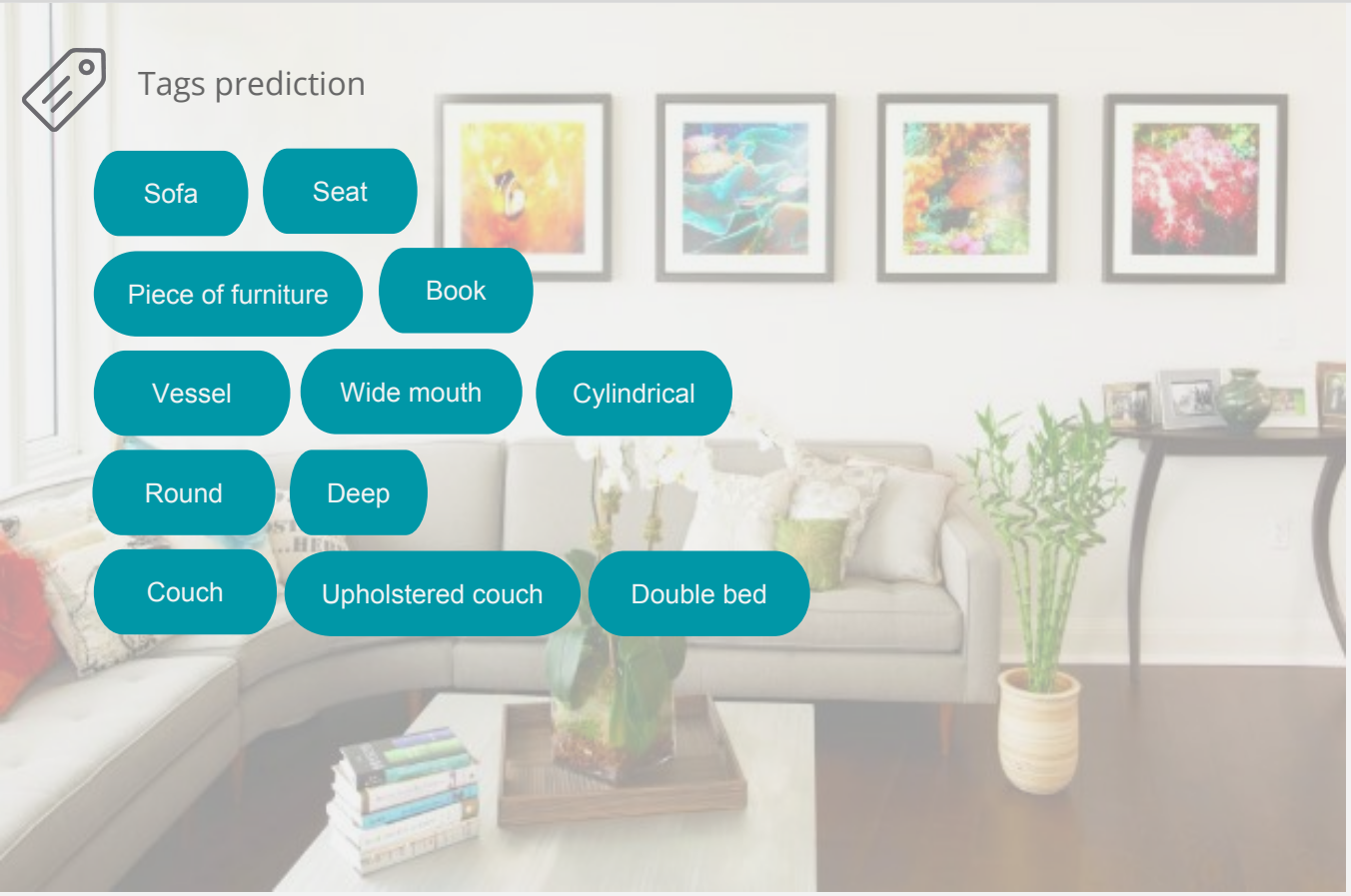
Specifications

- Age and gender estimation
- +5,000 celebrities for face recognition
- Add new people you want to recognize directly from our API

Powered by Nvidia Tesla NVIDIA

Visual Context model

DEEPVISION



How it works

Provides labels about the context, including products, objects, and other general concepts

Specifications

- +10,000 tags and concepts over a wide range of topics

Powered by Nvidia Tesla NVIDIA

Deep Vision API | Image Tagging

IMAGE TAGGING | VISUAL SEARCH | DOCUMENTATION

Paste your image url here

Visual Face

No faces were detected on this image.

Visual Brands

91% Starbucks

Visual Context

roll

sweet roll | numerous | yeast-raised

flavoring

coffee | sweetened coffee | superior dark

strong

Deep Vision API | Image Tagging

IMAGE TAGGING | VISUAL SEARCH | DOCUMENTATION

Paste your image url here

Visual Face

52% Adam Shulman | 99% Male | 40 Years Old

58% Anne Hathaway | 98% Female | 34 Years Old

Visual Brands

No brand logos were detected on this image.

Visual Context

person | human | fiance | duchess | ducal title | own right

Questions?
Thanks. We are hiring!

Don’t forget to attend Jorge Sanchez’s 5:30p.m. talk:
“Few shot learning in Computer Vision”

@deepvisionai

DEEPVISION