

Complete List of Detectable Items & Attributes

Application: DSDevices Edge AI (`com.dsdevices.dsdai`)

Pipeline Models: Object Tracking + Dedicated Gender Classifier + Dedicated Age Estimator

Execution Mode: 100% Offline Edge Inferences

Overview

The **DSDevices Edge AI** multi-model inference pipeline combines **Facial Demographic Classification** (Gender and Age) with **Real-Time Object Tracking** (80 COCO Object Classes).

When a **Person** is detected in view, the tracking box automatically crops the upper head/face region and executes the Gender and Age models in parallel, combining the output into a unified label:

For all other objects (e.g., **Cars, Trucks, Chairs, Laptops**), the object detection model outputs real-time bounding boxes with class names and confidence scores (e.g., `car 0.92`).

1. Demographic Attributes (Facial Models)

Attribute	Output Format	Example Display	Model Description
Gender	Classification Probability (Male / Female)	Gender: Male (98%)	Binary classifier running on cropped face region
Age	Numerical Regression (0 to 100 years)	Age: 28 years	Linear age estimator running on cropped face region

2. Vehicles & Transportation

Class ID	Class Name	Common Applications
0	person	Pedestrian detection, crowd counting, customer demographics
1	bicycle	Micromobility tracking, cyclist safety
2	car	Vehicle counting, parking monitoring, traffic flow
3	motorcycle	Traffic analysis, toll lane tracking
4	airplane	Tarmac / airport monitoring
5	bus	Public transit tracking, bus stop queue monitoring
6	train	Railway crossing & platform safety
7	truck	Logistics, loading dock tracking, freight monitoring
8	boat	Marine & waterway traffic

3. Traffic & Outdoor Infrastructure

Class ID	Class Name	Category
9	traffic light	Intersection monitoring
10	fire hydrant	Parking violation enforcement
11	stop sign	Traffic compliance analysis
12	parking meter	Parking space management
13	bench	Public space occupancy

4. Animals

Class ID	Class Name	Class ID	Class Name
14	bird	19	cow
15	cat	20	elephant
16	dog	21	bear
17	horse	22	zebra
18	sheep	23	giraffe

5. Electronics & Office Equipment

Class ID	Class Name	Application
62	tv	Screen/display presence
63	laptop	Workstation activity monitoring
64	mouse	Workstation peripherals
65	remote	Media room usage
66	keyboard	Office workspace tracking
67	cell phone	Distracted driving / restricted area policy enforcement

6. Household Furniture & Appliances

Class ID	Class Name	Class ID	Class Name
56	chair	68	microwave
57	couch	69	oven
58	potted plant	70	toaster
59	bed	71	sink
60	dining table	72	refrigerator
61	toilet		

7. Food & Beverages

Class ID	Class Name	Category
39	bottle	Beverage container tracking
40	wine glass	Dining / hospitality analytics
41	cup	Coffee shop / office cup tracking
42 - 45	fork, knife, spoon, bowl	Cutlery & tableware
46 - 55	banana, apple, sandwich, orange, broccoli, carrot, hot dog, pizza, donut, cake	Food item detection

8. Personal Accessories & Sports Gear

Class ID	Class Name	Category
24 - 28	backpack, umbrella, handbag, tie, suitcase	Personal belongings & luggage
29 - 38	frisbee, skis, snowboard, sports ball, kite, baseball bat, baseball glove, skateboard, surfboard, tennis racket	Sports equipment

9. Everyday Household Items

Class ID	Class Name	Class ID	Class Name
73	book	77	teddy bear
74	clock	78	hair drier
75	vase	79	toothbrush
76	scissors		

Data Summary & Output Access

All above items are output live through three simultaneous interfaces:

1. **Live Video Overlay:** Renders colored bounding boxes and text banners directly over camera feeds in `LiveViewActivity`.
2. **Local REST API (`GET /api/v1/detections`):** Returns formatted JSON containing item class names, confidence percentages, and normalized bounding box coordinates (`left`, `top`, `right`, `bottom`).
3. **Local CSV Audit Log (`detections.csv`):** Logs every detection with timestamp for offline compliance and analytics.