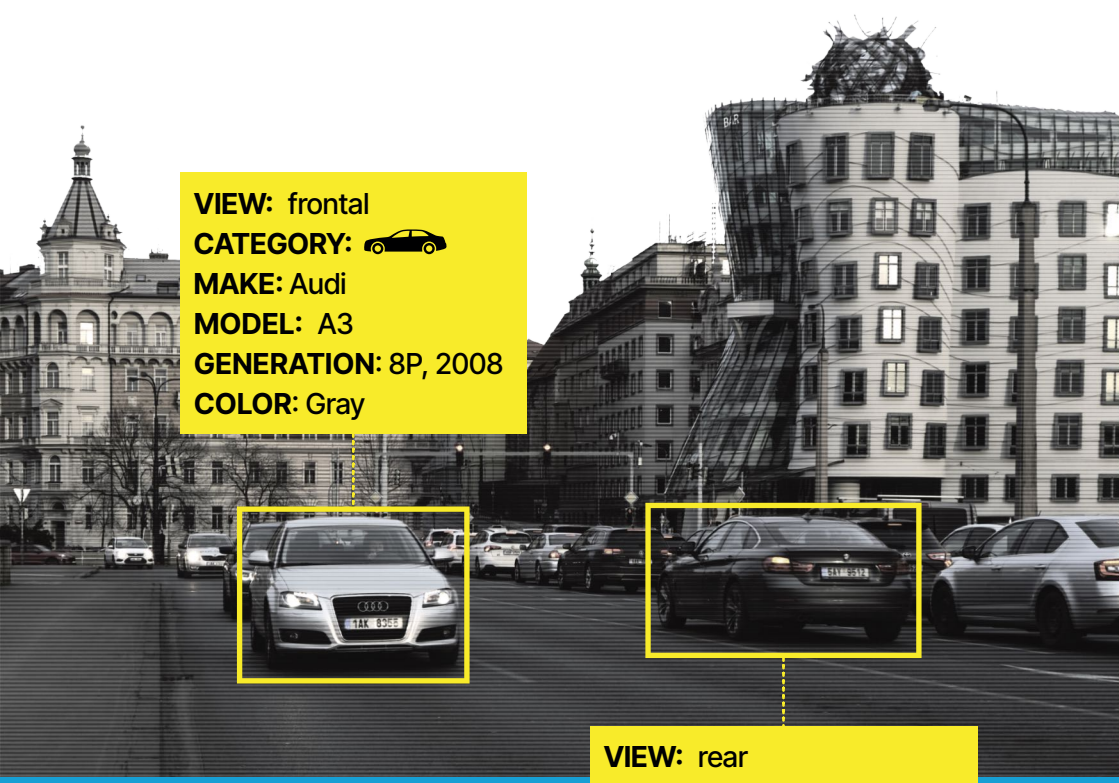

Make & Model Recognition

developed since 2007

eyedea RECOGNITION

16	371	3 005	7 830	20	360°	Day & Night
CATEGORIES	MAKES	MODELS	GENERATIONS	TAGS	VIEWS	LIGHT

Make & Model Recognition (MMR)

developed since 2007

Our **Make & Model Recognition (MMR)** system uses advanced AI technology to quickly and accurately identify a vehicle's make and model from an image. Leveraging state-of-the-art algorithms, it delivers precise results **within milliseconds**.

The system analyzes fine details of vehicle design and visual features to ensure reliable recognition. By simply uploading a photo, MMR provides comprehensive information including **make, model, generation, variant, color, and vehicle category**. MMR supports recognition from **all sides**.

Another unique featura of the MMR is its ability to recognize TAGs – specialized classifications such as emergency vehicles, fire brigades, pickup trucks, taxis, and more. The system currently supports 20 different TAGs, including axle counting and accurate differentiation between trucks and semi-trucks.

MMR also recognizes objects from the soft mobility domain. It can detect pedestrians, cyclists, animals, strollers, and other trolleys.

Additionally, it:

- Determines the number of riders on single-track vehicles (motorcycles, bicycles, scooters)
- Recognizes riders without helmets

99%	98%	95 %	4 ms
CATEGORY	MAKE & MODEL	GENERATION & VARIATION	GPU SPEED

How It Works

At the core of the MMR software is a deep neural network, specifically designed and trained by Eyedea for detailed recognition of vehicles and road users. The network processes a selected object crop as input and outputs a rich set of characteristics describing the analyzed object.

The inference engine is implemented within the MMR SDK, which is used across Eyedea products, including:

- Traffic Analyzer (Desktop & Console)
- MMR + ANPR REST Server
- TrafficEye.AI Cloud Service

For optimal performance, we recommend using MMR in combination with Eyedea object detectors, included in Eyedea ANPR packages. MMR can also be integrated with custom or third-party detectors.

Continuous Updates

MMR is updated every six months to include newly launched vehicle models from: Europe, North and South America, East Asia, the Middle East, Africa, and Australia.

Typical Applications

- E-tolling
- Traffic safety and surveillance
- Law enforcement
- Access control and parking management
- Police and governmental use
- Traffic infrastructure planning
- Smart city solutions
- And more

Deployment Options

- SDK
- Desktop & Console Application
- REST Server
- Cloud Service – www.trafficeye.ai

Eyedea Recognition provides global partners with high-performance visual recognition technologies powered by cutting-edge AI. While our roots lie in pioneering ANPR, our flagship expertise today is Advanced Make and Model Recognition (MMR)—delivering industry-leading accuracy in identifying vehicle brand, model, generation, and color.

Founded in 2006 as a spin-off from the Czech Technical University in Prague (CTU), Eyedea has spent nearly two decades at the forefront of primary AI research. Born from the prestigious Centre for Machine Perception, we continue to bridge the gap between academic excellence and industrial application. By maintaining deep ties with elite research teams, we ensure our proprietary models for traffic analysis and automotive monitoring always reflect the latest breakthroughs in machine learning.

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