With increasing automobile-related safety and security issues, it is critical to leverage all relevant data to quickly and accurately identify vehicles of concern. Criminals can no longer get away with swapping license/number plates to avoid discovery. IDOL, a Big Data analytics platform, enables a holistic vehicle identification approach by providing complementary capabilities of automatic number/license plate recognition and vehicle make/model recognition.

Automatic Number/License Plate Recognition
With support for 48 countries worldwide and the 50 states in the United States, a broad range of alphanumeric and non-alphanumeric plates can be recognized (see appendix for list).

IDOL identifies plates on vehicles travelling at speeds exceeding 100 MPH automatically from single images or video streams and is compatible with existing CCTV systems. As part of the IDOL platform, it automatically correlates and cross-references identified license plates with other data, making associations between recorded plates and other pieces of intelligence such as law enforcement records.

Vehicle Make and Model Recognition
The newest generation of IP-based video surveillance technologies is replacing analog CCTV systems to deliver superior definition, using high-megapixel cameras and high-quality lenses to produce full-motion, real-time video streaming. These capabilities work in close concert with the vehicle make and model image recognition function to detect the make of the car, the name of the company that manufactures it, and the model of the car (its specific name) by capturing images of the front and back of vehicles and checking them against a pre-trained database.

Better Together
While the two functions can work independently, they can seamlessly work together to deliver a comprehensive vehicle identification solution.

Here is how they work together:

- **Step 1:** Automatic number/license plate recognition identifies the location of a number plate (essentially as a zone with high contrast as plates are dark-light-dark-light).
- **Step 2:** Automatic number/license plate recognition analyzes the plate region to record OCR (optical character recognition) plate boundaries.
- **Step 3:** Automatic number/license plate recognition selects a region of the image around the number plate.
- **Step 4:** Automatic number/license plate recognition passes the region to vehicle make and model recognition, which runs an object detection algorithm on the zone to find a match to a known vehicle model.

With built-in digital and network recording capabilities and the ability to integrate with multiple...
repositories, such as law enforcement databases, vehicle registration, and traffic records, IDOL can be easily deployed for a wide range of vehicle video surveillance or traffic safety operations. It is well suited for use with cameras that are fixed in the same area of the traffic flow, where lots of traffic can be used to quickly build a database (e.g., bridges, overpasses, freeways, tunnels, parking entrances).

With this holistic approach, you can:

- Prevent false claims by using the rich media analytics solution at red lights to capture traffic violations on camera.
- Support ticket accountability with license plate and vehicle data.
- Corroborate tickets with license plate and vehicle make and model data.
- Create indisputable, court-admissible evidence.
- Help simplify database management by automatic population of source to table.
- Enable covert and overt operations when a license plate is just not enough.
- Vehicle make information provides accountability when a license plate has not yet been assigned.

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Learn more at

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