



OIL & GAS

AI IS COOKING WITH GAS

VIDEO RECOGNITION IN THE FIELD



INTRODUCTION

The oil and gas sector is currently facing a changing market as well as the necessity to question its strategic choices: **the price of oil is constantly rising**, oil is an exhaustible resource, and the **trend** is increasingly towards **renewable energies**. In addition, the oil and gas industry is a major consumer of water and energy resources, and is therefore subject to **increasingly stringent environmental standards**: this forces it to rethink its extraction, production and distribution methods. Faced with these changes, it has no choice but to **act on its operating costs and productivity while guaranteeing the safety of its employees**.

The implementation of video recognition solutions reduces many security and financial constraints by helping operators control critical tasks through automated systems.

3 KEY FIGURES OF THE SECTOR

89%

of oil companies
have already taken
**digitalization
initiatives**

100M

**barrels produced per
day** in August 2018,
including 32.5 million
barrels produced by
OPEC

According to
40%
of Top
Performers

artificial intelligence
and machine learning
are the technologies
that will mainly change
the game



REDUCE OPERATING COSTS

CHALLENGE

The collapse of the price of the barrel of oil in 2014 ushered in an era of rigor for the oil and gas sectors. Since then, global energy markets have been facing **increasing demand and declining profits**.

It is therefore essential for oil and gas operators to **rationalize their activities and reduce their costs through new technologies**: video recognition can provide innovative solutions that can really change the game.

OBJECTIVES

- Know the state of deterioration of equipment and infrastructure.
- Automate the inspection operations that are still done manually.

SOLUTIONS

Refinery corrosion detection

Optimize the planning of your refinery maintenance activities through automated and regular analysis of the degree of wear and tear of your infrastructure and identify the risks of malfunctions related to corrosion.

Detection of anomalies on industrial installations (turbines, pumps and compressors)

Automate the inspection of your installations with predictive maintenance by visual recognition. Oil and gas infrastructures are often located in areas that are difficult to access, but predictive maintenance allows you to plan your interventions remotely.

ADVANTAGES

The Daqing refinery in China is saving \$15,000 per year in maintenance and has reduced downtime since its automation.

- Reduce your maintenance costs and production downtime
- Reduce transportation costs to hard-to-reach areas through remote decision-making



SAFEGUARD VALIDATION

CHALLENGE

About **46%** of professionals in the oil and gas sector believe that **too little investment** is allocated to the inspection of installations and equipment for **safety purposes**.

However, safety is a prerequisite for oil exploitation. Without it, companies cannot operate: their reliability and sustainability depend on it. This is why knowledge of industrial risks and the rigorous and systematic application of safety rules are crucial.

OBJECTIVES

- Prevent the risk of explosion in fuel stations
- Prevent occupational accidents
- Prevent environmental disasters

SOLUTIONS

Detection of abnormal fire and smoke outbreaks

Initiate emergency procedures at the first sign of a fire hazard.

Detection of risky behavior of clients

Send an alert when a client does not comply with safety instructions at gas station sites, such as when a customer smokes near a gas pump.

Detection of risky situations for employees

Set up an alarm system when an employee engages in dangerous behavior such as supply truck drivers who are on the phone while driving or showing signs of falling asleep.

Detection of non-use of PPE

Be alerted in real time when a worker is not wearing his personal safety equipment (PPE).

ADVANTAGES

- Ensure a safe environment for your collaborators
- Reduce occupational accident rates
- Prevent any accident caused by the flammability of gas and oil



EXPLORATION ASSISTANCE

CHALLENGE

Prospecting is an extremely complicated process because of the very nature of the areas being surveyed (subsoils, seabeds...). **Seismic prospecting** is one of the most **resource-intensive methods** of exploration: seismic monitors generate more and more data while the number of geologists does not increase. The mission of the latter then becomes more and more complex due to the difficulty of prioritizing the images to be analyzed.

In addition, **competition is increasing** due to resource depletion. It is therefore necessary to be able to **be the first to identify a possible deposit** in order to exploit it later.

Video recognition makes it possible to analyze a large number of images in a short time with a reduced margin of error and increased accuracy.

OBJECTIVE

- Identify oil and gas deposits at a lower cost

SOLUTIONS

Drilling assistance

Target areas to be exploited more quickly and accurately. With visual recognition, increase the positive drilling ratio among all drilling done as part of your exploration activities.

Analysis of subsurface data from seismic surveys

Facilitate the work of analysts by automatically prioritizing seismic images based on the probability of the presence of a deposit.

Seismic image quality control process

Automatically identify images that do not meet quality standards for further analysis and/or apply pre-processing of images.

ADVANTAGES

- Increase your geologists' productivity by giving them tools to prioritize the images to analyze
- Increase the probability of success by drilling
- Be more proactive and be the first to exploit a deposit
- Reduce HSE costs on exploration operations





DOWNLOAD OUR WHITE PAPER TO
DISCOVER THE 6 STEPS TO BUILD
A VIDEO RECOGNITION SYSTEM



ABOUT DEEPOMATIC

Deepomatic provides an end-to-end deep learning platform that enables companies to build and operate image and video recognition applications at industrial scale. Data scientists and business executives use **Deepomatic Studio**® to design custom video recognition systems and **Deepomatic Run**® to operate image recognition applications in production.

We help enterprises increase the efficiency of operational processes (anomaly detection, behavior monitoring, self checkout) and solve specific business challenges across targeted industries (infrastructure, facility management, retail, catering, oil and gas)...

The applications developed by our clients are among the most advanced use cases in the world. The Compass group operates corporate restaurants. By simply taking one picture of each meal tray, Compass has developed a fluid cash register system that benefits 5000 people every day (this is a world first). The Abertis group develops tolls where vehicles are charged without going through any gates and without using anything other than cameras.



TALK ABOUT YOUR PROJECT WITH OUR
SALES DIRECTOR, **CÉCILE PAPIN**

CONTACT US



WHY US

END-TO-END SOLUTION ✓

From design to large-scale production, our products and partners support businesses every step of the way, whether it is annotating data, training AIs, or installing and maintaining AI-specific hardware.

OPEN THE BLACK BOX ✓

All of the applications developed, in particular datasets and algorithms, belong entirely to the client.

PRODUCTION-READY IN 3 MONTHS ✓

Our easy-to-use software allows operationalists as well as data scientists to quickly create best-in-class, production-ready AI applications. Businesses can expect a ROI in less than 3 months by deploying an AI on an industrial scale.

EDGE DEPLOYMENT ✓

We help enterprises deploy and monitor AI-ready edge devices at scale to comply with hardware and security hardware constraints.

THEY TRUST US

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SANOFI

