IPX COPILOT

TECHNICAL SPECIFICATIONS

IPXCopilot is a multimodal artificial intelligence model designed to interpret images based on questions posed in natural language. Combining neural networks and large language models (LLMs), it can understand visual content and generate precise, contextualized responses tailored to the query.

WHAT DOES IT DO?

IPXCopilot automatically analyzes, validates, and interprets visual data received from camera systems and monitoring platforms.
It is capable of:

- Understanding commands and questions formulated in natural language.
- Automating image-based decisions.
- Verifying and correcting alerts from other systems.
- Reducing human intervention in visual processes.

OBJECTIVE

- Provide a secondary layer of visual decision-making for systems like IPXMonitor and IPXAnalytics.
- Automate visual inspections via prompts.
- Describe vehicles by model, brand, and color.
- Provide data such as age, gender, and expression using images of people's faces.

WHY USE IT?

- Reduces human error in visual operational processes.
- Works offline, with full control over privacy and sensitive data.
- Automates decisions, increasing operational agility and consistency.
- Enhances security by intelligently double-validating alerts.

ADVANTAGES

- **Advanced Visual Interpretation:** Analyzes images in real time based on natural language questions.
- **100% Local Execution:** Works without the need for an internet connection, ensuring privacy and low latency.
- **Availability:** Can run 24/7, making requests at any time, at no additional cost.
- **High Accuracy:** Capable of identifying objects, situations, patterns, and behaviors with greater depth.
- **Prompt Automation:** Ability to receive customized commands or questions for different operational scenarios.
- **Alert Validation:** Reprocesses alerts generated by other systems to reduce false positives and negatives.

HOW TO USE?

IPXCopilot can be integrated directly with IPX platforms (such as IPXMonitor and IPXAnalytics).
After configuration, the operator can:

1. Define validation rules through customized prompts.
2. Receive responses and generate more accurate alerts.

INTEGRATION WITH IPXANALYTICS

IPXAnalytics uses artificial intelligence to learn, detect, and classify events captured by surveillance cameras. It applies neural network-based algorithms for object detection and configures rules to trigger desired events.

- **Confirmation of critical alerts:** Copilot double-checks alerts issued by IPXAnalytics, reducing the chance of false alarms and making the system even more reliable.
- **Refinement of visual classifications:** If IPXAnalytics detects suspicious behavior, Copilot can interpret the image in detail, identify additional elements (PPE, objects, license plates, faces), and enrich the classification.
- **Adapting to new demands:** With flexible prompts, Copilot can be instructed to look for specific patterns or behaviors, even if they haven't been previously trained in Analytics, bringing adaptability to the system.

INTEGRATION WITH IPXMONITOR

IPXMonitor centralizes, manages, and facilitates the processing of events and alarms from various sources. Its secure, responsive web architecture allows for real-time monitoring and management of incidents, as well as granular access control, routine automation, and full integration with artificial intelligence.
With IPXCopilot, IPXMonitor evolves to a higher level, adding an extra layer of automation and intelligent visual analysis, enabling:
Automatic validation of events and alarms: Copilot reviews captured events like a virtual operator, confirming whether there are false positives or negatives before notifying the operator, reducing operational strain and response time.

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Application Examples

Question about the image:

Are there people fighting in this image?

✅ Processed in 2.49s

Yes, the image shows four people engaged in what appears to be a physical altercation.

Question about the image:

Are there people fighting in this image?

✅ Processed in 1.43s

No, there are no people fighting in this image. The people appear to be dancing or enjoying themselves in a group.

Question about the image:

What is the smallest number in this image?

✅ Processed in 1.06s

The smallest number on the ruler in the image is 30.

Question about the image:

Is there any sign of vandalism in the image, please answer yes or no?

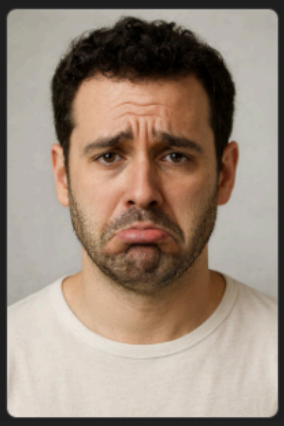
✅ Processed in 0.41s

Yes.

Application Examples

✅ Processed in 1.11s

{'model': 'Civic', 'brand': 'Honda', 'color': 'black'}



✅ Processed in 1.27s

{'age': '30', 'gender': 'male', 'expression': 'sad'}

Question about the image:

This board is damaged, please answer with yes or no?

✅ Processed in 0.58s

Yes.

Question about the image:

Is anyone vandalizing this image, please answer yes or no?

✅ Processed in 0.69s

Yes.