



# Mitigating security risk with generative AI

In the evolving digital landscape, security threats are becoming more sophisticated, requiring dynamic and proactive measures. Generative AI is a transformative technology that is shaping the future of security across all industries.

Understanding the intricacies of generative AI is imperative for using its capabilities to bolster your security operations, automate alerts, maintain a proactive posture, and so much more.

## Three benefits of generative AI



### Address the skills gap

Ask AI copilots questions about alerts and use it to quickly write up notes on events, freeing up time for more in-depth work.



### Increase visibility

Easily identify threats and anomalies that would have otherwise been missed in the mountain of data your organization produces.



### Respond faster

Help teams identify vulnerabilities and anomalies swiftly. Reduce the time to contain breaches by processing contextually relevant proprietary data for quick, insightful analysis.



## How to secure environments with generative AI

### Alert summarization

Get a detailed description of why an alert was triggered and recommended steps to triage and remediate the attack.

### Workflow suggestions

Get a step-by-step guide for accomplishing a task by adding an alert exception or creating a custom dashboard.

### Query conversion

Slash the time it takes to migrate from legacy SIEMs by pasting a query from another product and converting it.

## Ready to take the next steps? Our advice: start small.

Take advantage of all of the benefits generative AI has to offer by following an incremental implementation strategy. Identify your most pressing needs and one use case you'd like to see enhanced with generative AI. Use an AI-powered search analytics platform that has the ability to securely link your proprietary data with LLMs to generate output that's accurate, relevant, and business-specific. Elastic is here to help.

[Find out more](#)

# AI and generative AI cheat sheet

## Artificial Intelligence

### Artificial intelligence (AI):

The ability of machines to perform tasks that typically require human intelligence, such as learning, reasoning, problem-solving, and decision-making.

### Artificial intelligence for IT operations (AIOps):

The application of AI, machine learning (ML), and analytics to improve the day-to-day operational work for IT operations teams.

### Deep learning:

A subfield of neural networks that has many layers, allowing it to learn significantly more complex relationships than other machine learning algorithms.

### Machine learning (ML):

A branch of AI that focuses on the use of data and algorithms to imitate the way humans learn, gradually improving accuracy over time. One way they do this is with neural networks that utilize interconnected nodes in a layered structure that resembles the human brain.

### Natural language processing (NLP):

A subfield of artificial intelligence that focuses on enabling machines to understand, interpret, and generate human language.

### Neural networks:

A type of machine learning algorithm that consists of interconnected layers of nodes that process and transmit information. It is inspired by the structure and function of the human brain.

## Generative AI

### Generative AI:

A branch of AI centered around computer models capable of generating original content that mimics human creativity. By leveraging the power of large language models, neural networks, and ML, generative AI models are trained to learn the underlying structures, relationships, and patterns to produce new and unique outputs like images, video, code, and more.

### Large language model (LLM):

A deep learning algorithm that can perform a variety of natural language processing (NLP) tasks.

### Prompting:

A prompt is an instruction given to an LLM. Few-shot prompting teaches the model to predict outputs through the use of examples.

### Retrieval augmented generation (RAG):

A framework that enables users to “feed” an LLM private or proprietary, external data so it has the most up-to-date information.

### Hallucinations:

When an LLM produces a false or nonsensical output or one that does not match the user’s intent. Because large language models are not search engines or databases — they only predict the next syntactically correct word or phrase — they can appear to produce results that are factually incorrect or contradictory, especially if the data set they are trained on contains contradictory information.

