# Skab Digital Robusthedi AI-æraen

### Morten Rundager

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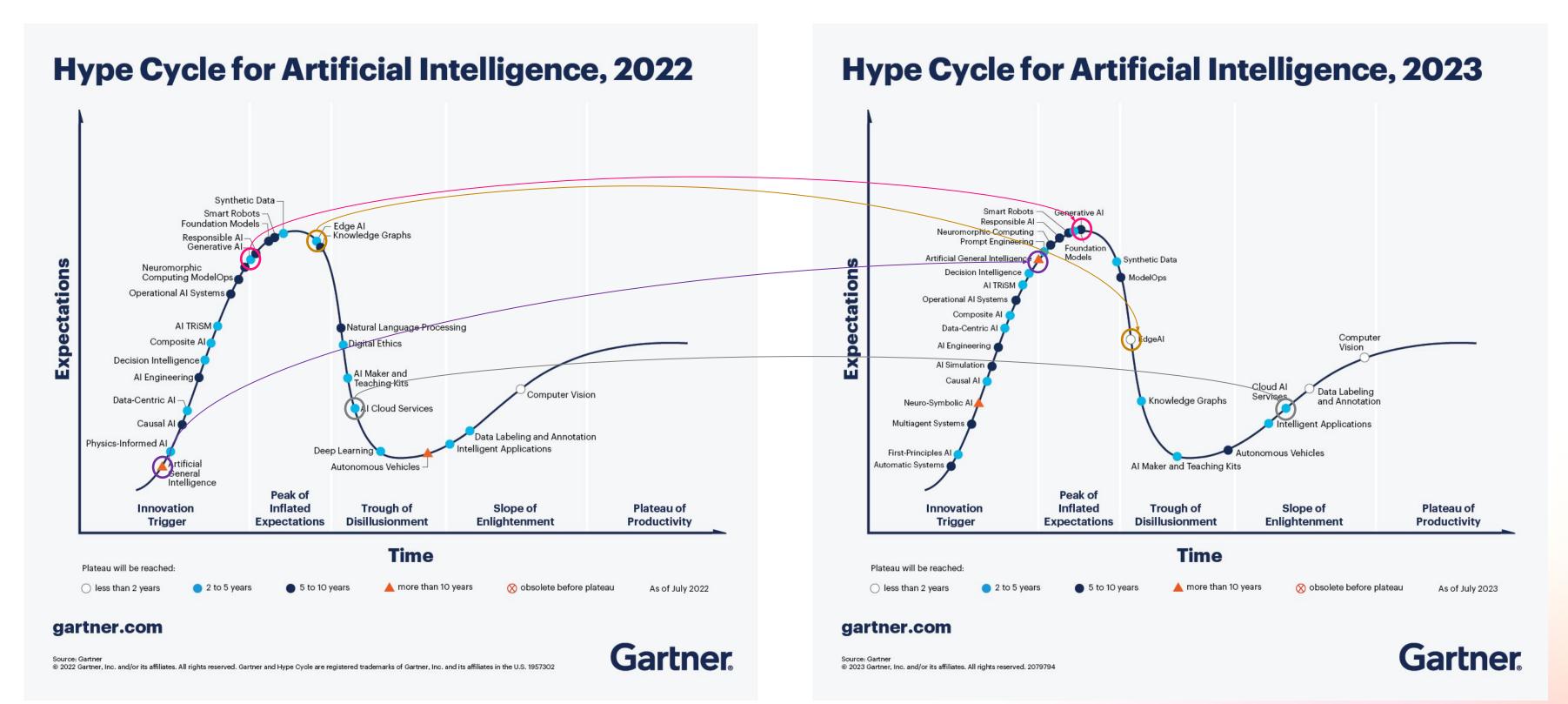


splunk>

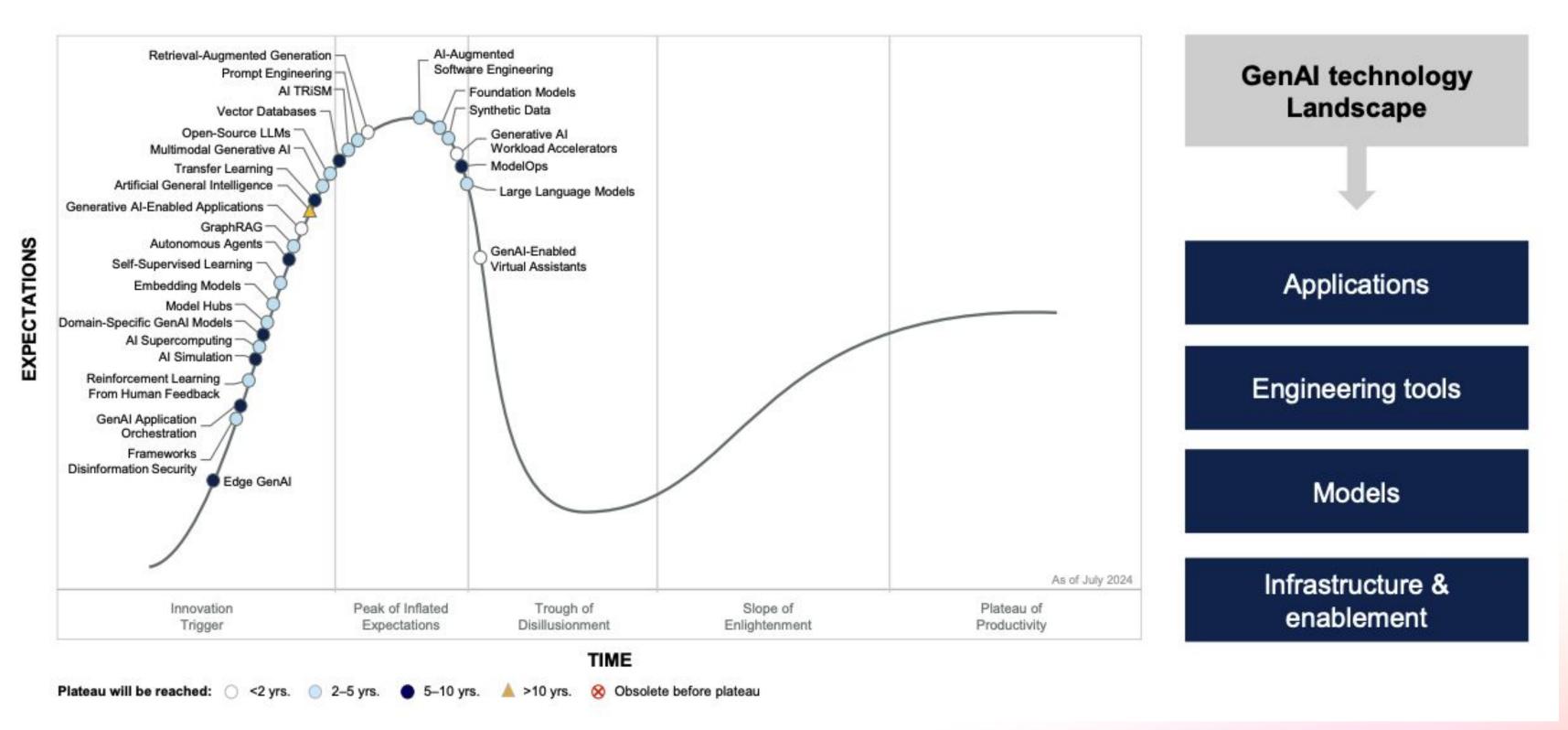
# Hvordan går det med det AI?



### Where did we come from?



## Hype Cycle for AI in 2024





# We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run.

Amara's Law

# Hype Cycle for AI in 2024

Benefit	Years to mainstream adoption						
	Less than two years	Two to five years	Five to 10 years	More than 10 years			
Transformational		<ul> <li>Al-augmented software engineering</li> <li>Al supercomputing</li> <li>Foundation models</li> <li>Large language models</li> <li>Multimodal generative Al</li> <li>Self-supervised learning</li> </ul>	· Autonomous agents	Artificial general intelligence			
High	GenAl-enabled virtual assistants     Generative Al-enabled applications     Generative Al workload accelerators     Retrieval-augmented generation	<ul> <li>AI TRISM</li> <li>Disinformation security</li> <li>Embedding models</li> <li>Model hubs</li> <li>Open-source LLMs</li> <li>Prompt engineering</li> <li>Reinforcement learning from human feedback</li> <li>Synthetic data</li> </ul>	<ul> <li>Al simulation</li> <li>Domain-specific</li> <li>GenAl models</li> <li>Edge GenAl</li> <li>GenAl application orchestration frameworks</li> <li>ModelOps</li> <li>Transfer learning</li> <li>Vector databases</li> </ul>				
Moderate		GraphRAG					

Source: Hype Cycle for Generative AI, 2024, 31 July 2024



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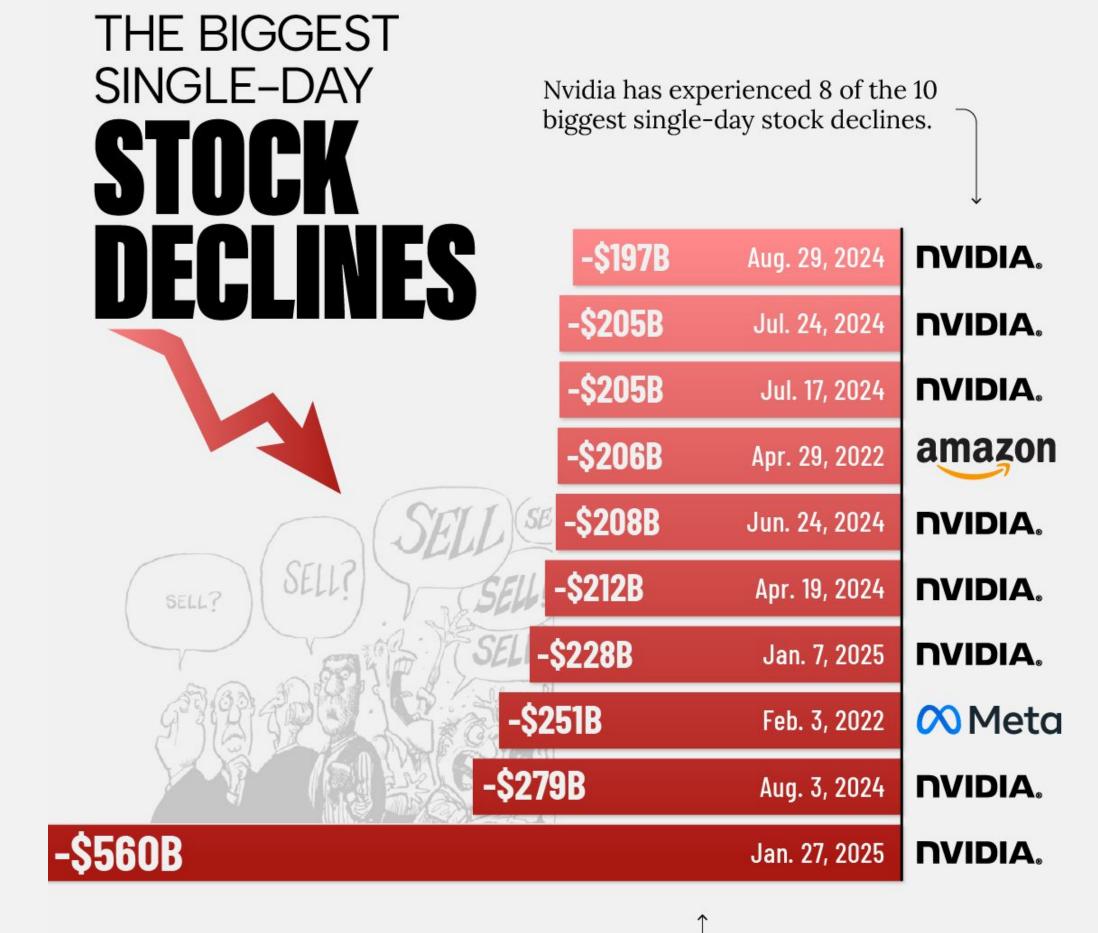
# Deepseek and Alibaba join the party!

Rank* (UB)	Rank (StyleCtrl)	Model	Arena Score	95% CI 🔺	Votes 🔺	Organization	License
1	2	Grok-3-Preview-02-24	1412	+8/-10	3364	xAI	Proprietary
1	1	GPT-4.5-Preview	1411	+11/-11	3242	OpenAI	Proprietary
3	5	Gemini-2.0-Flash-Thinking-Exp-01-21	1384	+6/-5	17487	Google	Proprietary
3	3	Gemini-2.0-Pro-Exp-02-05	1380	+5/-6	15466	Google	Proprietary
3	2	ChatGPT-4o-latest (2025-01-29)	1377	+5/-4	17221	OpenAI	Proprietary
6	3	DeepSeek-R1	1363	+8/-6	8580	DeepSeek	MIT
6	10	Gemini-2.0-Flash-001	1357	+6/-5	13257	Google	Proprietary
7	3	01-2024-12-17	1352	+4/-6	19785	OpenAI	Proprietary
9	10	Qwen2.5-Max	1336	+7/-5	11930	Alibaba	Proprietary
9	7	ol-preview	1335	+4/-3	33167	OpenAI	Proprietary
9	10	o3-mini-high	1329	+8/-6	9102	OpenAI	Proprietary
11	13	DeepSeek-V3	1318	+5/-4	22007	DeepSeek	DeepSeek
12	16	GLM-4-Plus-0111	1311	+8/-8	6035	Zhipu	Proprietary
12	15	Owen-Plus-0125	1310	+7/-5	6054	Alibaba	Proprietary
12	5	Claude 3.7 Sonnet	1309	+9/-11	4254	Anthropic	Proprietary

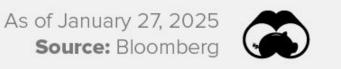
Spurce: <a href="https://lmarena.ai/">https://lmarena.ai/</a>



# The week that shook Silicon Valley



Nvidia's stock plummeted after a Chinese startup called DeepSeek released a powerful AI model.



## What are we using today?

Just to make my life easier...



ChatGPT



Copilot



Gemini



Claude Al



**Notebook LM** 



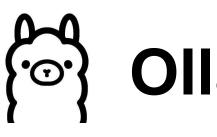
**MidJourney** 



HeyGen

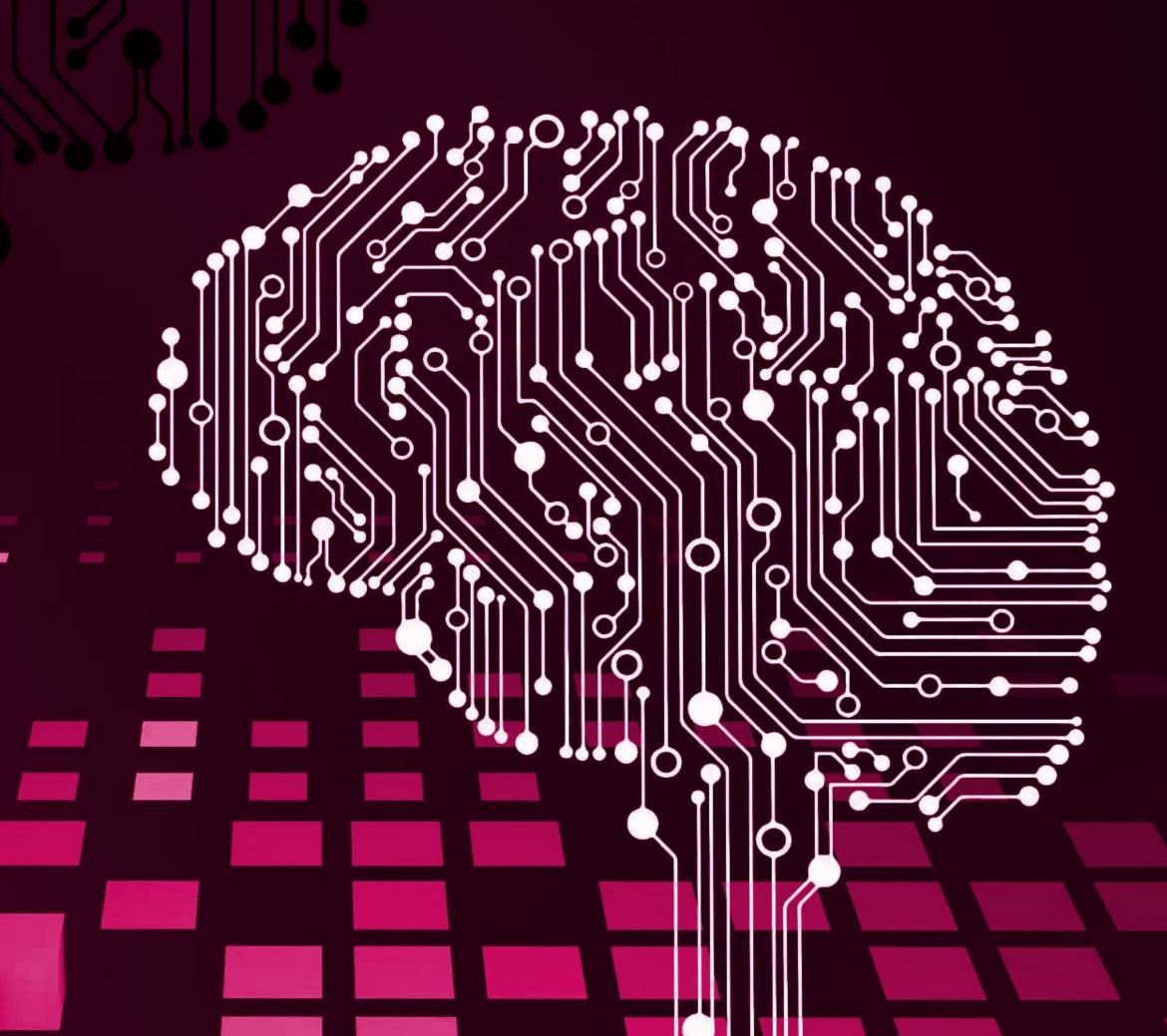


Vast Al





# The Next 10 Years Will Be Shaped By AI Adoption





## AI Agents

- a software program that can interact with its environment, collect data, and use the data to perform self-determined tasks to meet predetermined goals.
- Humans set goals, but an AI agent independently chooses the best actions it needs to perform to achieve those goals.
- Altera has built 1000 AI Agents and asked them to play Minecraft.
- Bots:
   Bots communicate over discord, google docs, discord, google sheet and slack

## AI Agents working together







Agents collected over 300 items.

Agents created an economy making transactions.

Olivia gave up her dreams for the society.

splunk>

# Hvad så med Splunk & AI?



# Build digital resilience with Splunk

Splunk brings SecOps, ITOps and engineering together to...



Prevent major issues



Remediate faster



Adapt quickly

## Gartner

Splunk is the only vendor recognized as a leader in the latest Magic Quadrant™ Reports for SIEM and APM and observability.

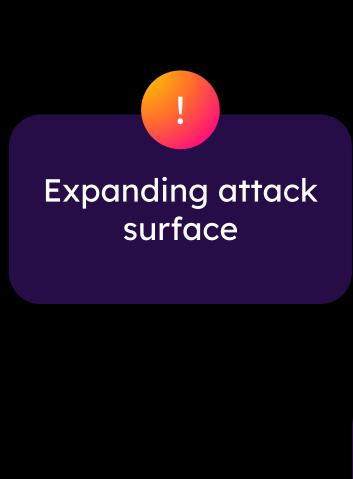
#### **A Leader**

Gartner® Magic Quadrant™ for SIEM

#### **A Leader**

Gartner® Magic Quadrant™ for APM and Observability

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Siloed tools, teams, data, and workflows



Compliance







mandates



Sophisticated threat actors











Talent and skills shortages

## Embedded capabilities within products

# Splunk has been innovating with AI since 2015



Generative AI chatbots

AI libraries and APIs for developers

Customizable

learning, and

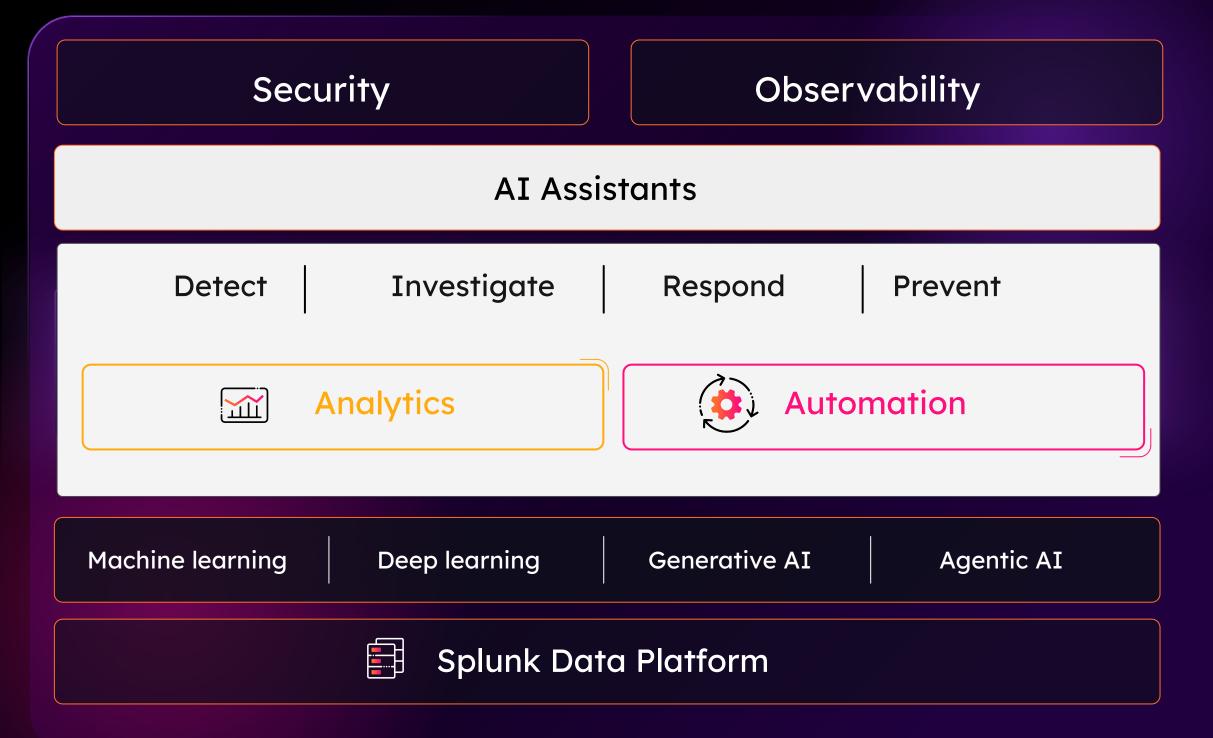
data science

ML, deep

tools

### With a foundation of AI services + data

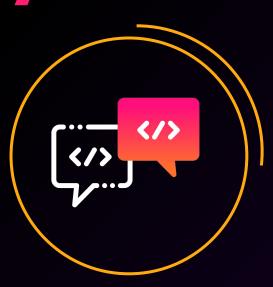
- Generative AI Assistants to simplify and make your job easier.
- Prebuilt AI analytics and task automation enabled by agentic AI.
- Powered by leading AI technologies to deliver accuracy and efficiency.
- Integral part of the Splunk portfolio and Data Platform.



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# Including a broad portfolio of ML and AI analytics





**Generative Al** 

## Make everyone an expert

Reduce need for environment and tool expertise by simplifying analysis and investigations.

# Detect and predict

Real-time, streaming analysis to detect anomalies and forecast trends.



**Machine and Deep Learning** 

## **Correlate** and diagnose

Aggregate and analyze all data to investigate and identify root causes.

# Delivering productivity increases when investigating security incidents

Scenario: Security analyst is investigating a high priority RBA finding

#### With AI Assistant (in minutes\*)

- 1. Summarize findings within an Investigation
  - Leverage Gen AI to generate a summary of findings and relevant MITRE ATT&CK techniques and tactics
- 2. Generate SPL queries to investigate data
  - Leverage Gen AI to suggest investigative SPL queries based on natural language prompts
- **5.** Conversational security inquiries
  - a. Have security topic related conversations
- 4. Generate post-investigation report
  - Leverage Gen AI to create an Investigation Report capturing timeline of events, analyst investigation notes, and MITRE ATT&CK info

#### Without AI Assistant (~hours\*)

#### 1. Review findings

- Manually review all correlated alerts and metadata to better understand the incident
- b. Manually research tactics and techniques to better understand the incident

#### 2. Formulate investigation strategy

a. Leverage tribal knowledge and experience to determine investigation next steps

#### 3. Broaden the investigation

 Using tribal knowledge and experience expand the investigation beyond initial findings by manually authoring investigative SPL queries

#### 4. Post-incident summary report

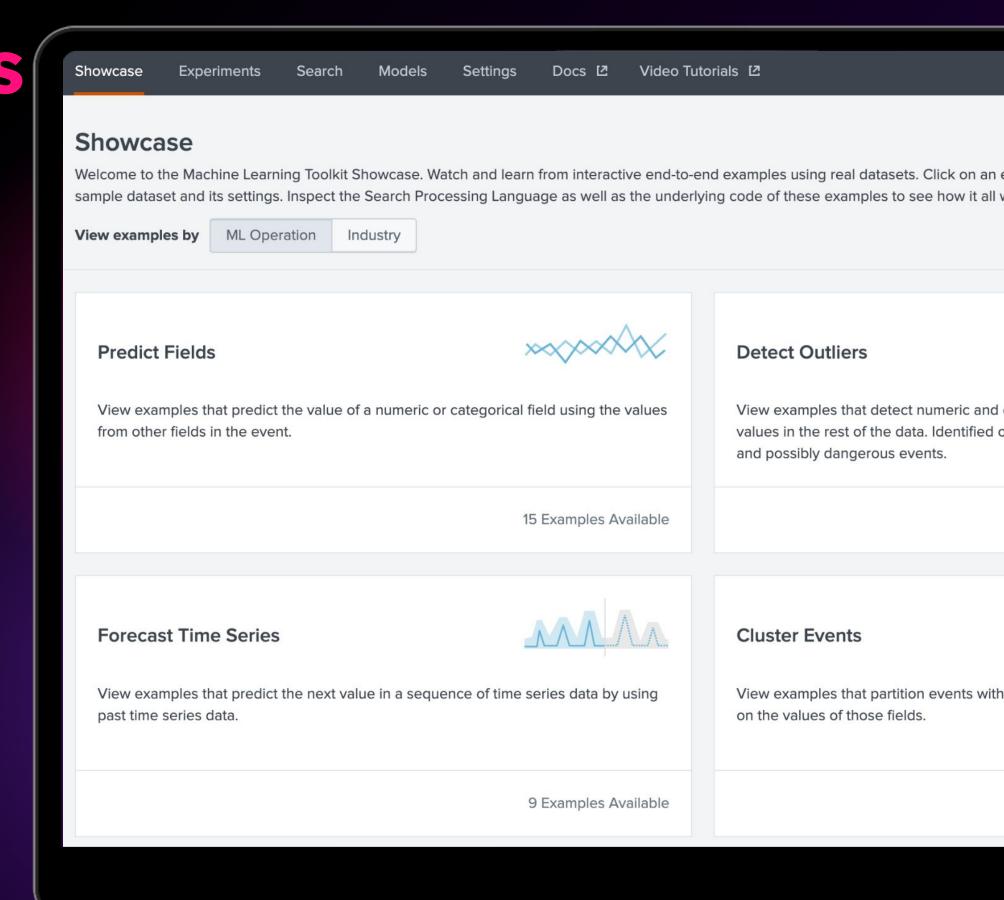
 Manually summarize and document initial findings, remediation actions, and other relevant information to close the incident

# Extend pre-built AI to custom-built AI

# Customize AI use cases with Machine Learning Toolkit (MLTK)

in Splunk Cloud and Enterprise

- Experiment and model your Splunk data with guided assistant for the whole AI workflow.
- 50+ algorithms to choose from or bring your own model.
- Train and deploy with search commands and operationalize in real-time.

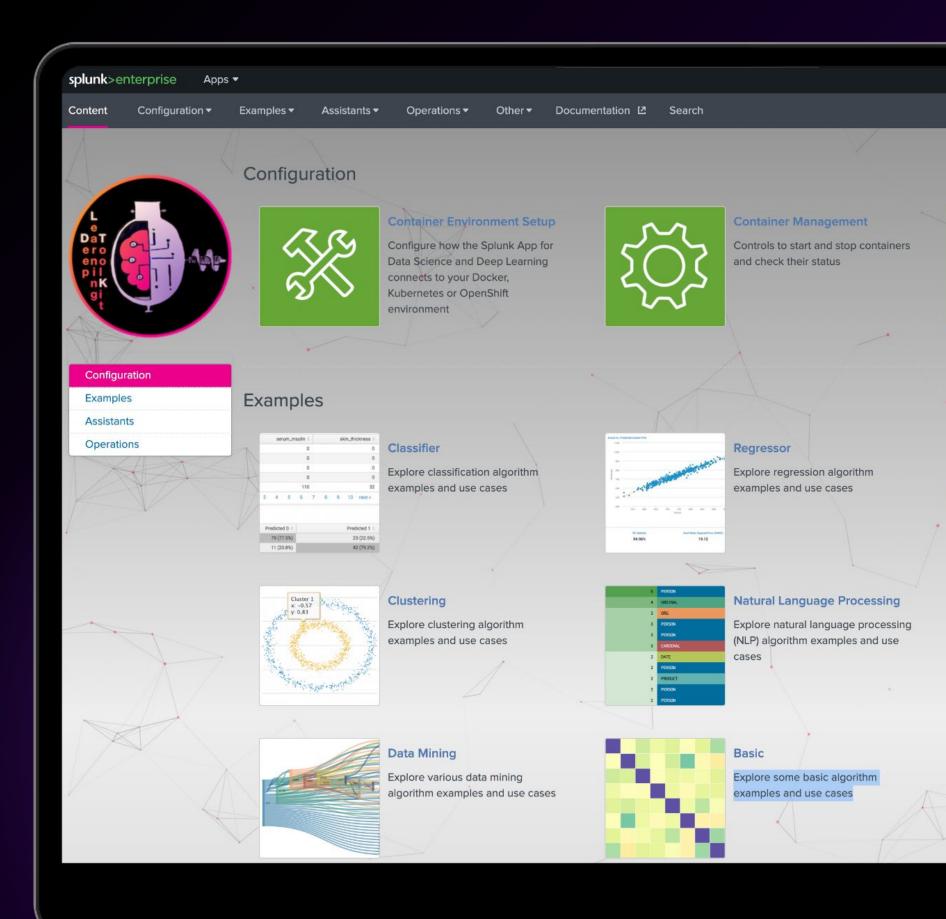


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# Extend MLTK to operationalize advanced custom AI/ML use cases

Splunk App for Data Science and Deep Learning

- 35+ Code Examples: Guided model building, testing, and deployment
- Container Management: productionized for scalability & optimization on CPU & GPU
- State of the art AI frameworks and tools
- Flexible deployments and open source
- Extension to LLMs and VectorDB



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## 3. RAG-based LLM Example Dashboard (2)

Part 2: Querying LLM



### \_time \$ query \$ 2024-06-24 14:27:33 Customer customer@email.com had a Payment processing error during checkout for the product

page of DB-SG-G01. Answer the following three questions: 1.Tell me more about this product.

2. List of employees in charge of this product support 3.What were the resolution notes in the past tickets with the same issue description?

#### **User Query:**

LLM-RAG Result

Customer customer@email.com had a Payment processing error during checkout for the product page of DB-SG-G01. Answer the following questions: 1.Describe this product. 2. List of employees in charge of this product support 3.What were the resolution notes in the past tickets with the same issue description?

#### **LLM Output**

#### RAG\_Response \$

I'm happy to help!

\*\*Question 1: Tell me more about this product\*\*

Dragon's Bane - Game of the Year Edition (Xbox Series X) is an immersive fantasy adventure that sets you on a medieval quest. As you explore the world, you'll encounter mythical creatures, engage in dynamic combat, and uncover the secrets of this epic game.

\*\*Question 2: List of employees in charge of this product support\*\*

Buttercup's customer support team for Dragon's Bane - Game of the Year Edition (Xbox Series X) includes:

- \* Emily Chen (Senior Customer Support Specialist)
- \* Ethan Lee (Customer Support Specialist)
- \* Maya Patel (Customer Support Specialist)
- \* Julian Sanchez (Customer Support Specialist)

\*\*Question 3: What were the resolution notes in past tickets with the same issue description?\*\*

Although there are no identical issue descriptions, our team has successfully resolved similar payment processing errors in the past. Our typical approach involves:

- 1. Verifying customer account information and payment details.
- 2. Troubleshooting potential issues with payment gateways or account validation.
- 3. Manually processing payments if necessary to complete transactions.

Please note that these answers are based on the limited context information provided and might not be exact or comprehensive.

#### RAG\_References \$

/srv/notebooks/data/Buttercup/support\_ticket.csv
/srv/notebooks/data/Buttercup/support\_ticket.csv
/srv/notebooks/data/Buttercup/Buttercup\_customer\_support\_list.pdf
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# Thank You



#### STUDIE 1

#### STUDIE 2

#### MØDELOKALET

#### GARAGEN

10:20 - 10:50

#### Sikkerhed mod cybertrusler i en Al-drevet verden

Microsoft

I en tid hvor kunstig intelligens revolutionerer vores verden, er det afgørende at forstå, hvordan vi effektivt kan beskytte os mod de stigende cyber-trusler.

I dette indlæg ser vi nærmere på Microsofts strategi indenfor for Cybersikkerhed. Vi vil udforske de nyeste teknologier og løsninger, herunder Microsoft Security Copilot, der hjælper med at sikre virksomheder mod avancerede trusler.

10:55 - 11:25

#### The Al Cybersecurity Arms race

- (oplæg på engelsk)

Lenovo

An overview of the risks, threats, and opportunities defenders are facing in the rapidly evolving landscape of AI and cybersecurity.

In this session, we will explore how AI is creating both new risks and opportunities in cybersecurity. We'll examine how Al investments in 2025 will focus on areas such as IT operations, software development, and cybersecurity, and how organizations can leverage AI to strengthen their defenses. We'll also discuss the challenges of scaling Al including data quality, governance, and integration with existing security systems.

11:30 - 12:00

#### Datasikkerhed i M365 med Microsoft Purview

Microsoft

Tag din datasikkerhed til det næste niveau. Vi vil i denne session dykke ned i de yderst aktuelle emne "Datasikkerhed". Vi vil udforske dataklassificering og databeskyttelse, og give nogle eksempler hvordan man kan beskytte sine værdifulde data.

Vi også diskutere, hvordan kunstig intelligens spiller en afgørende rolle i dette domæne. Lær, hvordan Microsoft Purview bla. kan hjælpe med at identificere og beskytte følsomme oplysninger og forbedre den overordnede sikkerhedsstrategi.

10:20 - 10:50

#### Fra Traditionelt SOC til SOC 3.0:

Sådan transformerer Agentic Al cybersikkerheden

**Fortinet** 

I årtier har Security Operations Center (SOC) været organisationers digitale forsvarslinje, men cybertruslerne udvikler sig hurtigere end nogensinde.

For at følge med har SOC gennemgået en markant transformation, men hvordan ser fremtidens SOC så ud? Kom og hør, hvordan sikrer din organisation sig en plads i førersædet.

10:55 - 11:25

#### **Data og Cyber resiliency er kritisk**

**Dell Technologies** 

Få indsigt i, hvordan man bedst sikrer data og backups mod cyberangreb, så de kan gendannes hurtigt og uden kompromittering.

11:30 - 12:00

#### Ved du, hvordan hackere ser din virksomhed udefra?

**Fortinet** 

Tag din datasikkerhed til det næste niveau. Vi vil i denne session dykke ned i de yderst aktuelle emne "Datasikkerhed". Vi vil udforske dataklassificering og databeskyttelse, og give nogle eksempler hvordan man kan beskytte sine værdifulde data.

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10:20 - 10:50

#### **HPE Secure by Design** - Når Gaffatape ikke er nok

**Hewlett Packard Enterprise** 

I denne session udforsker vi, hvordan HPE's sikkerhedsløsninger integrerer server, storage og netværk for at beskytte dit datacenter og dine data.

Vi ser på sikkerhed fra et inside-out perspektiv – og hvordan du sikrer dine systemer fra kernen og ud. Der vil blive givet praktiske eksempler på, hvorledes HPE's løsninger kan hjælpe dig med at efterleve elementer i §6 i den netop vedtagne NIS2-lovgivning.

10:55 - 11:25

#### Når du er løbet tør for Gaffa tape, er det godt du har HPE Secure by design

**Hewlett Packard Enterprise** 

På denne session vil vi gennemgå HPE's sikkerhedsløsninger, der sikrer, at netværket effektivt binder servere og storage sammen.

Vi viser, hvordan både brugere, data og applikationer beskyttes - uanset hvor de befinder sig. Kort sagt, vi ser på datasikkerhed fra et 'outside-in' perspektiv.

Der vil blive givet praktiske eksempler på, hvorledes HPE's løsninger kan hjælpe dig med at efterleve elementer i §6 i den netop vedtagne NIS2-lovgivning.

10:20 - 10:50

#### **Security in the Al age**

Cisco

Få indsigt i, hvordan man bedst sikrer data og backups mod cyberangreb, så de kan gendannes hurtigt og uden kompromittering.

10:55 - 11:25

#### Skab digital robusthed i Al-æraen

Cisco

Vi viser, hvordan du med Splunk kan beskytte hele din digitale infrastruktur mod moderne cybertrusler – i realtid og i stor skala. Ved at kombinere data fra virksomhedens infrastrukturkomponenter og brug af Al løser vi sikkerhedsdataudfordringer med enestående præcision og sikrer din virksomhed mod trusler.

11:30 - 12:00

#### The UnKnown **Trend Micro**

At stole udelukkende på Endpoint Detection and Response (EDR) er som at gå rundt i blinde. For at beskytte din organisation effektivt, skal du kombinere EDR med flere lag af beskyttelse mod de stadigt voksende cybertrusler.