TECHCRUSH ARTIFICIAL INTELLIGENCE BOOTCAMP
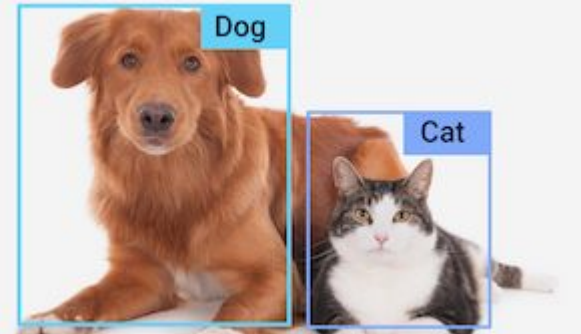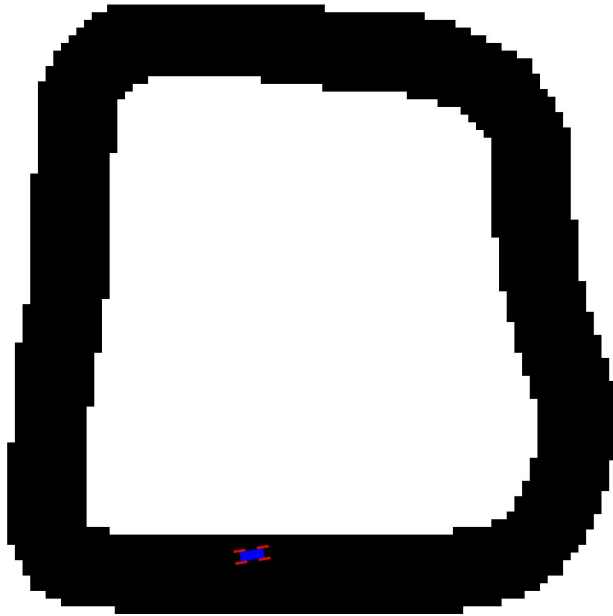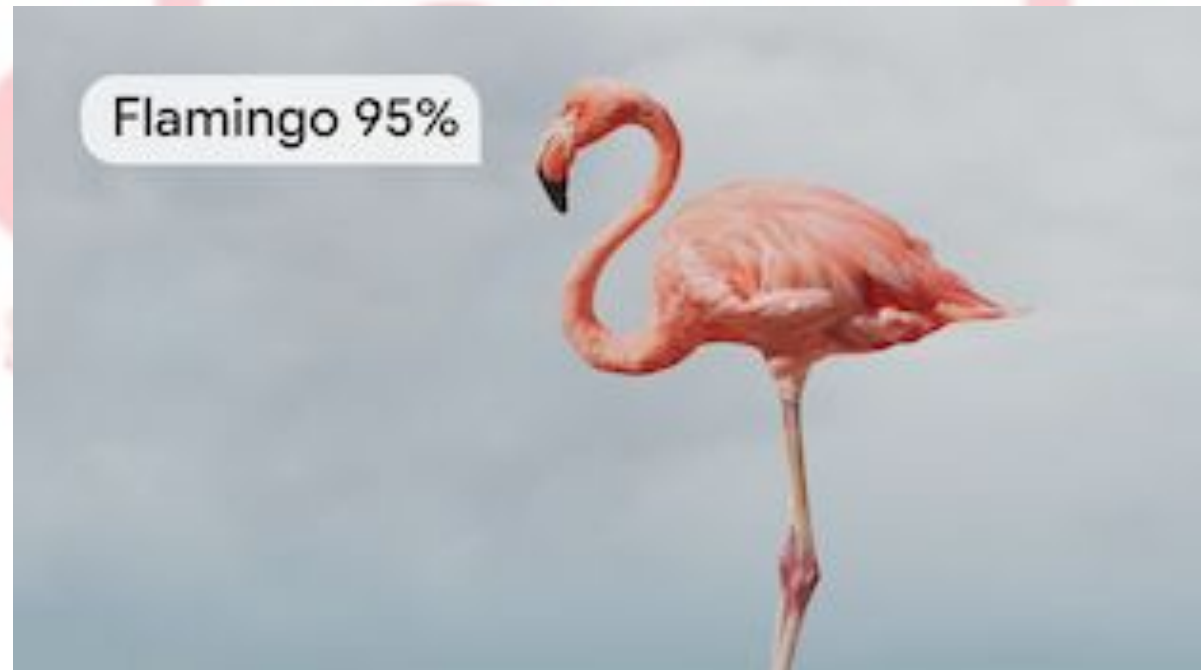
Facilitator: Hammed Obasekore
August 8th, 2025
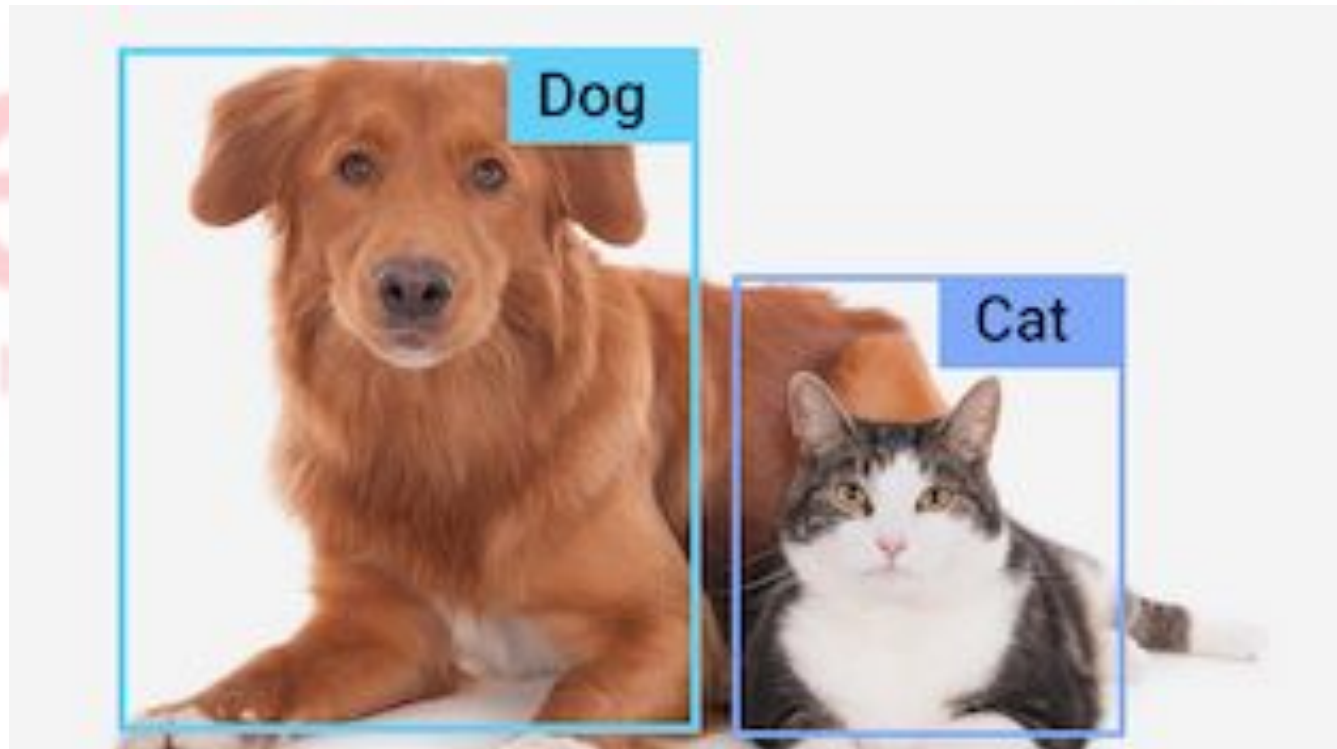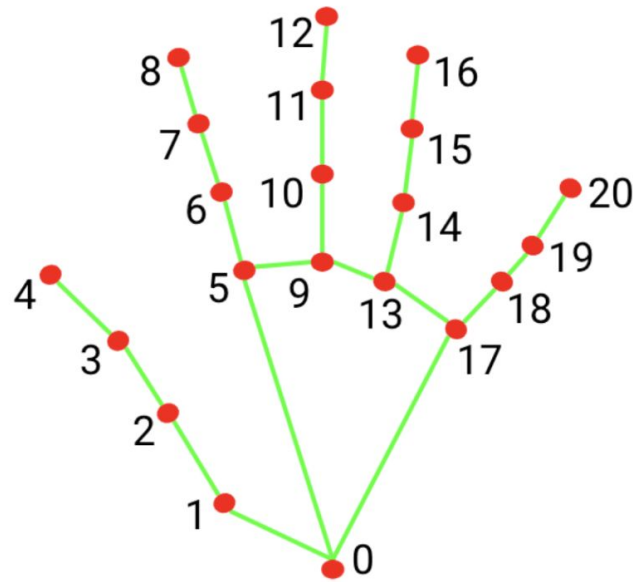
Welcome
Get motivated

Welcome
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[Image Classification](#)

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Welcome
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Object Detection

Welcome
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Pose Estimation

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0. WRIST
1. THUMB_CMC
2. THUMB_MCP
3. THUMB_IP
4. THUMB_TIP
5. INDEX_FINGER_MCP
6. INDEX_FINGER_PIP
7. INDEX_FINGER_DIP
8. INDEX_FINGER_TIP
9. MIDDLE_FINGER_MCP
10. MIDDLE_FINGER_PIP

11. MIDDLE_FINGER_DIP
12. MIDDLE_FINGER_TIP
13. RING_FINGER_MCP
14. RING_FINGER_PIP
15. RING_FINGER_DIP
16. RING_FINGER_TIP
17. PINKY_MCP
18. PINKY_PIP
19. PINKY_DIP
20. PINKY_TIP

Gesture Recognition

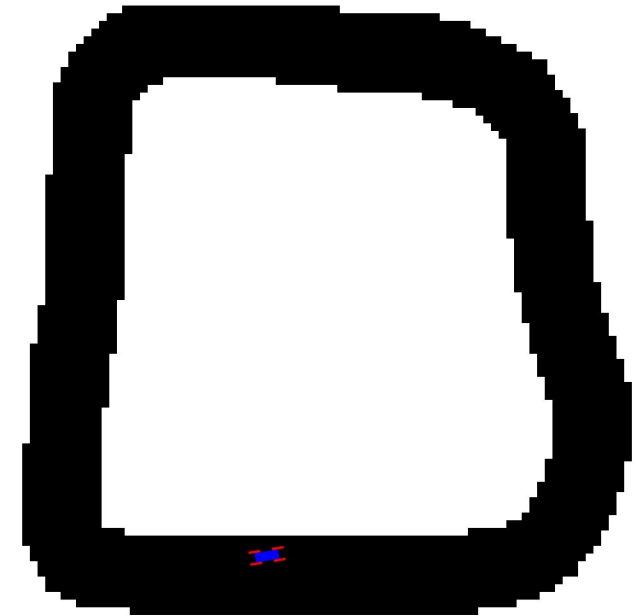*Disclaimer: This training material belongs to techcrush and shouldn't be shared*

Welcome
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Image Segmentation

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Racing Car

Welcome
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Audio Classification

Dominant Colour Extraction

Welcome
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Canva

Graphics
Design

Use Case
Get motivated

Brand Colour
From Logo

Dominant Colour Extraction

Use Case
Get motivated

Virtual Sport Coach

Virtual Fitness AI Instructor

Pose Estimation

Use Case
Get motivated

Real
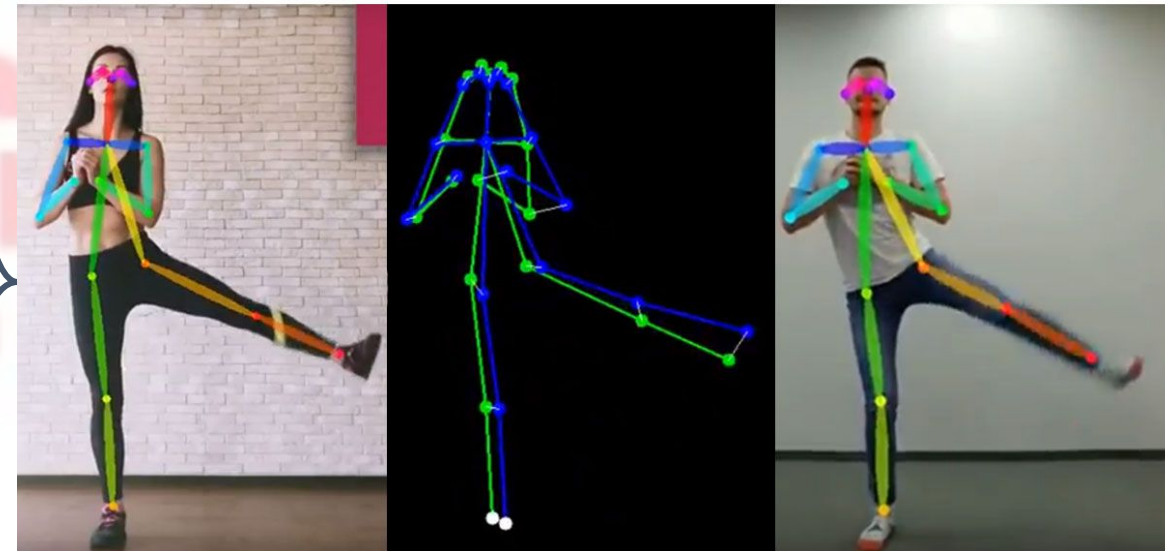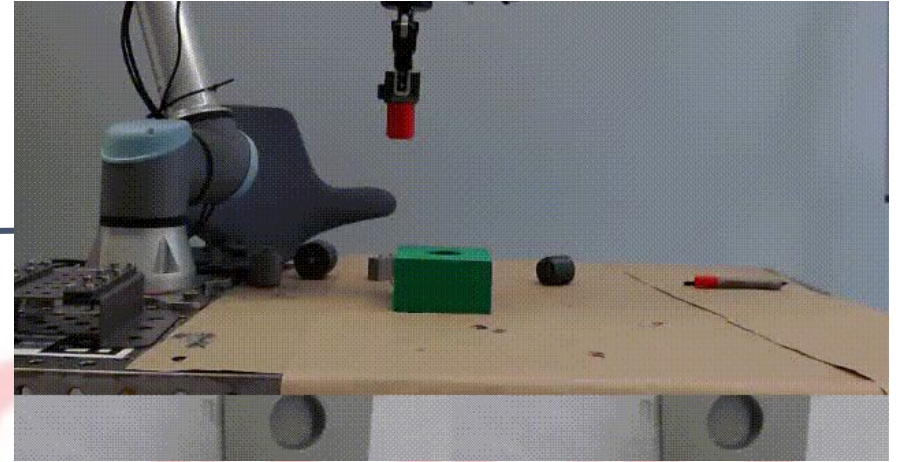
Training Ground

Robot Putting Peg-In-Hole

[ultralytics/ultralytics: Ultralytics YOLO](#) 🚀

Detect

Segment

Classify

Pose

OBB

Track

[Ollama - AI Models](#)

deepseek

DeepSeek-R1
Try it now

Qwen

Qwen
Try it now

Phi-4

Phi-4
Try it now

MISTRAL AI_

Mistral
Try it now

Llama 3.3
Try it now

Gemma

Gemma 3
Try it now
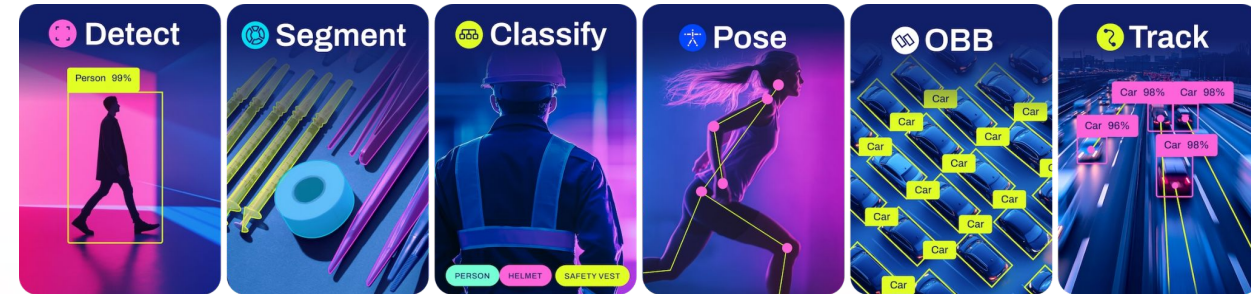
All For Free
Get motivated
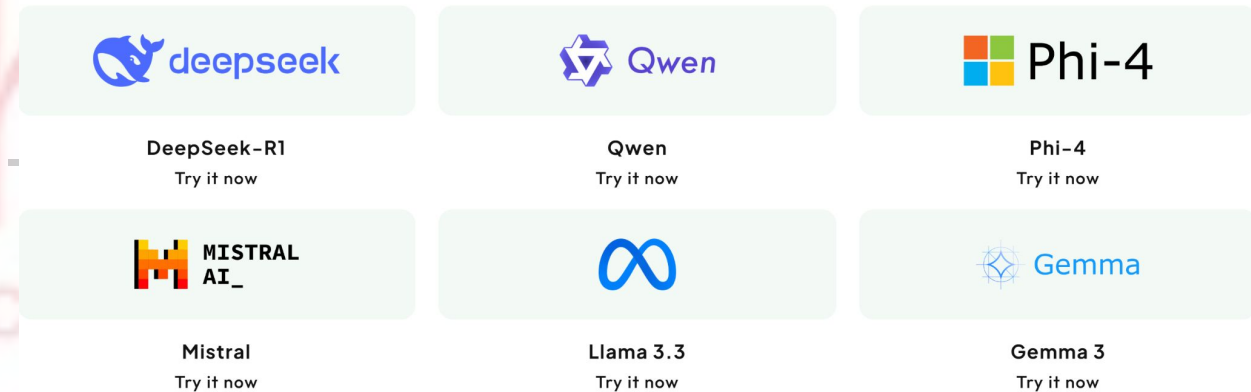
Backgrounds and Expectations

Introduction to AI

Artificial intelligence defined

Artificial intelligence is a field of science concerned with building computers and machines that can reason, learn, and act in such a way that would normally require human intelligence or that involves data whose scale exceeds what humans can analyze.

AI is a broad field that encompasses many different disciplines, including computer science, data analytics and statistics, hardware and software engineering, linguistics, neuroscience, and even philosophy and psychology.

On an operational level for business use, AI is a set of technologies that are based primarily on machine learning and deep learning, used for data analytics, predictions and forecasting, object categorization, natural language processing, recommendations, intelligent data retrieval, and more.

Source: Google

(7) How smart are monkeys? (chimpanzee) 😮 #experiment - YouTube

Artificial Intelligence

AI involves techniques that equip computers to emulate human behavior, enabling them to learn, make decisions, recognize patterns, and solve complex problems in a manner akin to human intelligence.
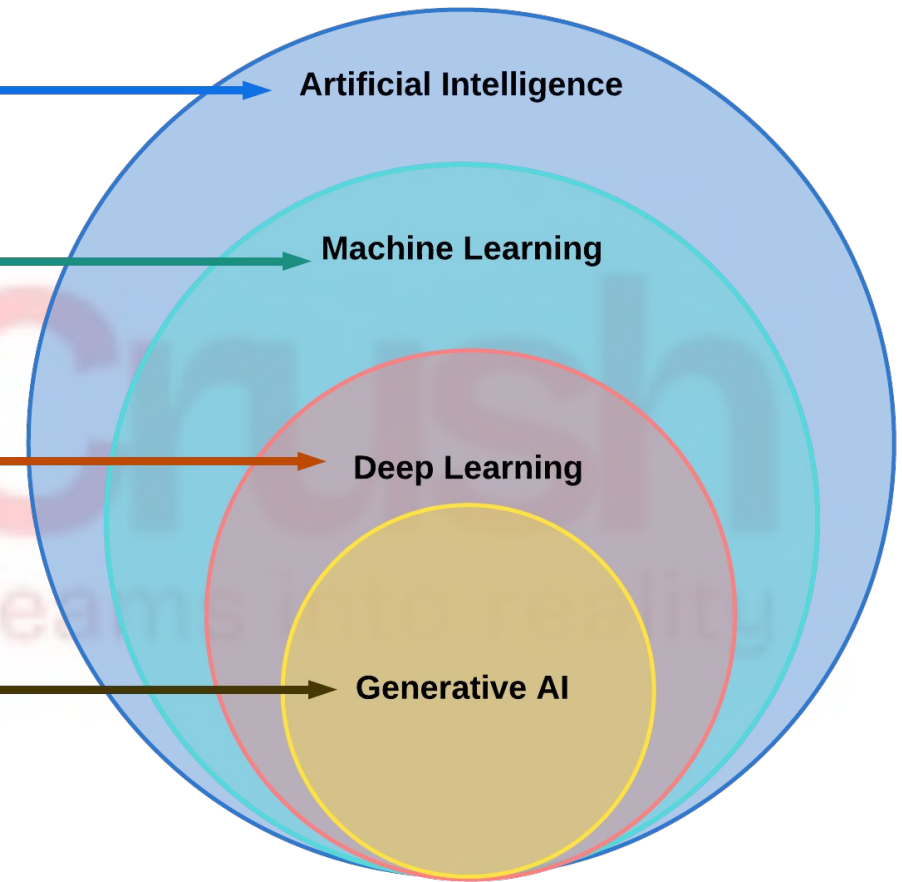
Machine Learning

ML is a subset of AI, uses advanced algorithms to detect patterns in large data sets, allowing machines to learn and adapt. ML algorithms use supervised or unsupervised learning methods.

Deep Learning

DL is a subset of ML which uses neural networks for in-depth data processing and analytical tasks. DL leverages multiple layers of artificial neural networks to extract high-level features from raw input data, simulating the way human brains perceive and understand the world.

Generative AI

Generative AI is a subset of DL models that generates content like text, images, or code based on provided input. Trained on vast data sets, these models detect patterns and create outputs without explicit instruction, using a mix of supervised and unsupervised learning.

Artificial Intelligence

Machine Learning

Deep Learning

Generative AI

Unraveling AI Complexity - A Comparative View of AI, Machine Learning, Deep Learning, and Generative AI.

(Created by Dr. Lily Popova Zhuhadar, 07, 29, 2023)
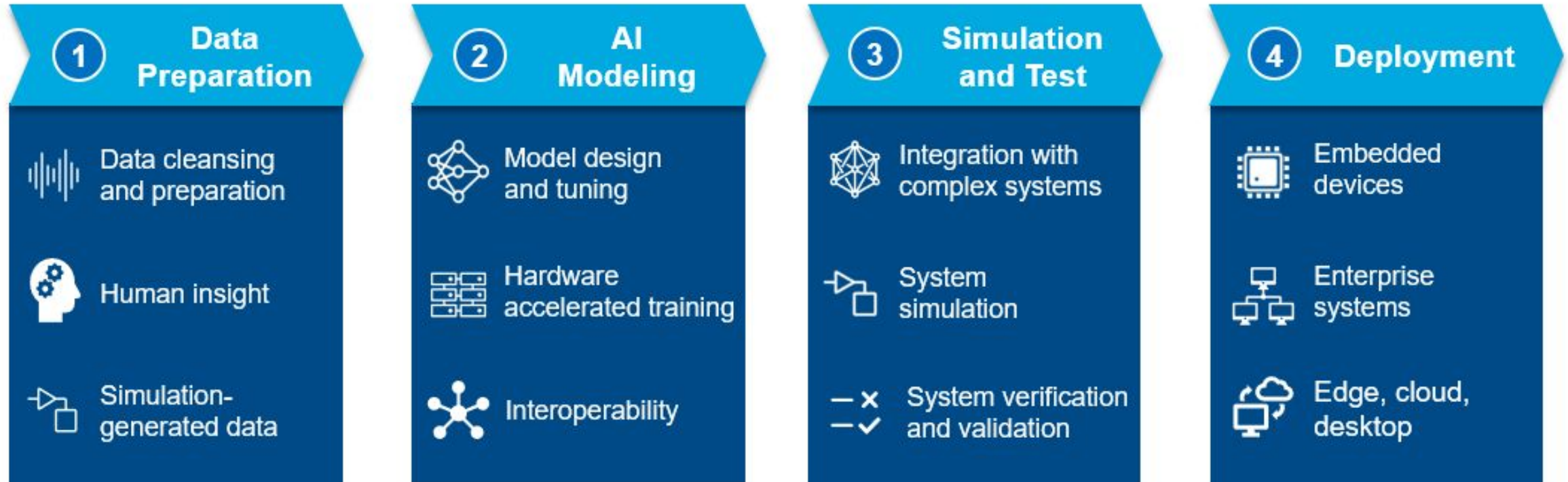
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Source: MathWorks

Demonstration of AI Workflow

Source: MathWorks

Questions?