aws machine learning

AI and Machine Learning at AWS

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What is it?

Artificial intelligence

Any technique that enables computers to mimic human intelligence using logic, if-then statements, and ML (including deep learning)
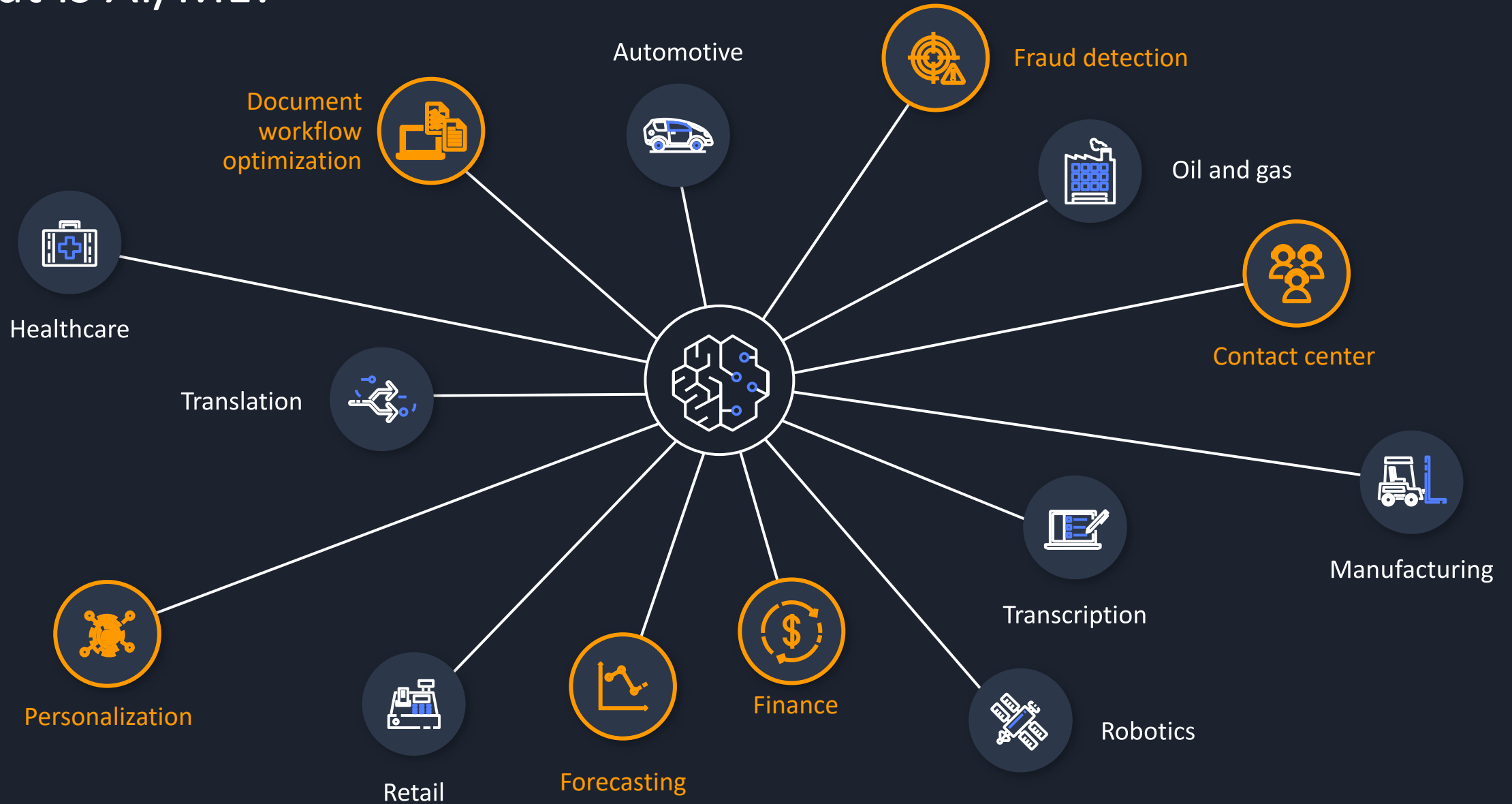
Machine learning

Subset of AI that uses machines to search for patterns in data to build logic models automatically
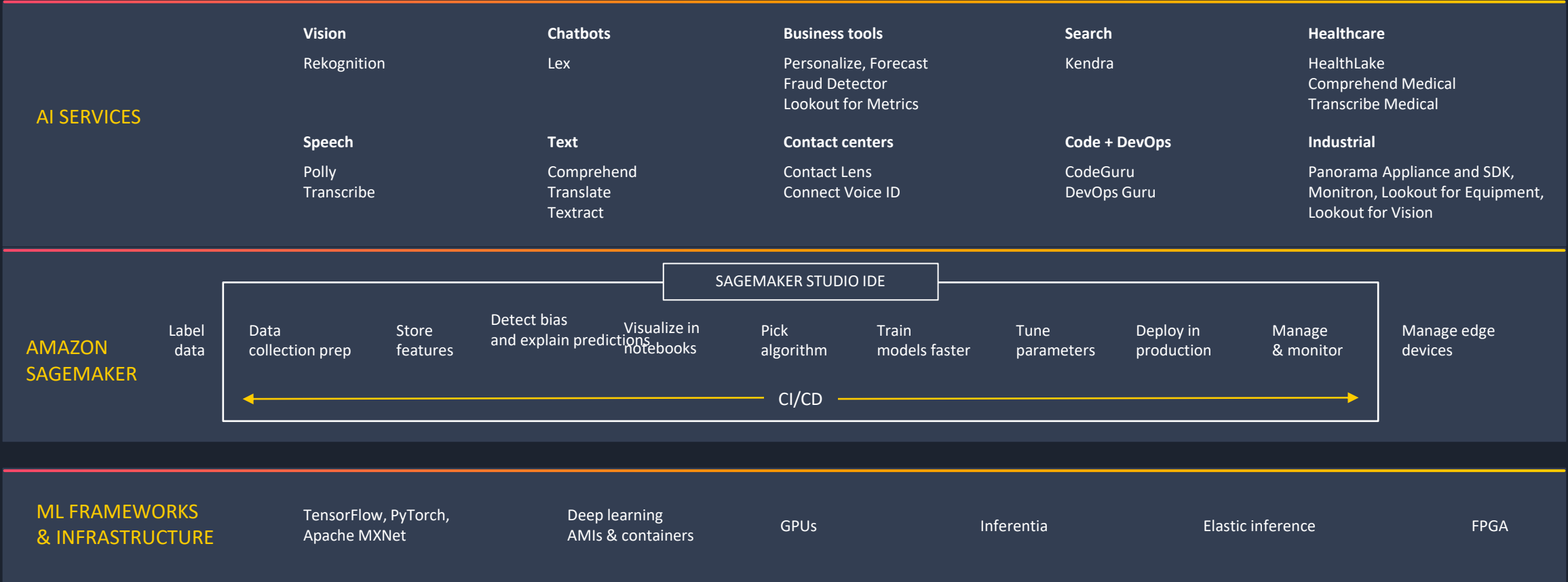
Deep learning

Subset of ML composed of deeply multi-layered neural networks that perform tasks like speech and image recognition

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What is AI/ML?

The **AWS ML stack**

Broadest and most complete set of machine learning capabilities

AI SERVICES

Vision	**Chatbots**	**Business tools**	**Search**	**Healthcare**
Rekognition	Lex	Personalize, Forecast Fraud Detector Lookout for Metrics	Kendra	HealthLake Comprehend Medical Transcribe Medical
Speech	**Text**	**Contact centers**	**Code + DevOps**	**Industrial**
Polly Transcribe	Comprehend Translate Textract	Contact Lens Connect Voice ID	CodeGuru DevOps Guru	Panorama Appliance and SDK, Monitron, Lookout for Equipment, Lookout for Vision

AMAZON SAGEMAKER

SAGEMAKER STUDIO IDE

Label data	Data collection prep	Store features	Detect bias and explain predictions	Visualize in notebooks	Pick algorithm	Train models faster	Tune parameters	Deploy in production	Manage & monitor	Manage edge devices

CI/CD

ML FRAMEWORKS & INFRASTRUCTURE

TensorFlow, PyTorch, Apache MXNet	Deep learning AMIs & containers	GPUs	Inferentia	Elastic inference	FPGA

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What AI/ML is not

NOT a decision-maker

NOT a homogeneous range of services and technologies

NOT a static or fully-mature set of technologies

NOT suited to one-size-fits-all governance.

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AI/ML Use Case:
Detecting market manipulation activities

FINRA is the primary regulator of broker-dealers and financial exchanges in the US

Every day FINRA monitors 100% of equities and options activity and processes up to 155 billion records on a single day. Using AWS Machine Learning FINRA is able to automate the detection of market manipulation.

Thank-you!