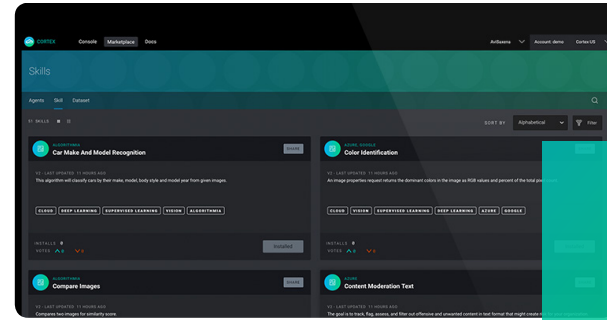# CognitiveScale

Cortex Data Sheet

> "We chose CognitiveScale as an IDC Innovator because they balance the market's appetite for augmented intelligence and provide the opportunity for clients with data scientists to combine models and algorithms from various sources."
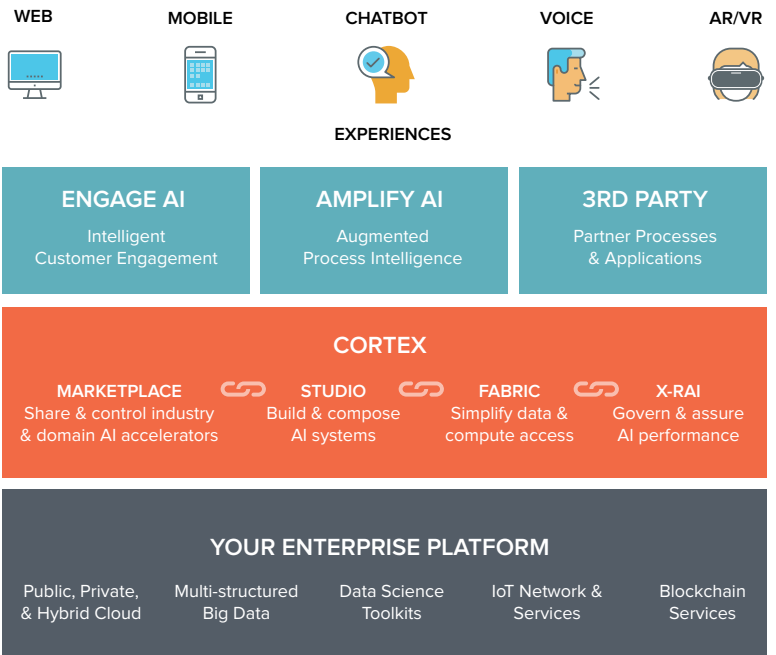
Cynthia Burghard, IDC

> "We have looked at over 200 AI companies and selected CognitiveScale because of their completeness of vision and platform backed by proven results."

Chief Data Officer, Global 100 Financial Services Company

AI MARKETPLACE

Radical Simplification of the AI Application Lifecycle

CognitiveScale's Cortex software simplifies the design, development, delivery and management of cognitive business processes that get smarter and better with time. It also ensures that these self-learning systems are explainable and transparent in their operations

	WEB	MOBILE	CHATBOT	VOICE	AR/VR

EXPERIENCES

COGNITIVE PROCESS ACCELERATORS
Skills, Models, Datasets, and other AI building blocks

ENGAGE AI	AMPLIFY AI	3RD PARTY
Intelligent Customer Engagement	Augmented Process Intelligence	Partner Processes & Applications

CORTEX COGNITIVE PLATFORM
Environment, tooling and libraries for cognitive process lifecycle management

CORTEX

MARKETPLACE	STUDIO	FABRIC	X-RAI
Share & control industry & domain AI accelerators	Build & compose AI systems	Simplify data & compute access	Govern & assure AI performance

NEXT GENERATION INFRASTRUCTURE
Customer's enterprise infrastructure and tooling

YOUR ENTERPRISE PLATFORM

Public, Private, & Hybrid Cloud	Multi-structured Big Data	Data Science Toolkits	IoT Network & Services	Blockchain Services

1. Discover and Source in the AI Marketplace

Marketplace is an online AI collaboration system that brings together industry specific data, models, algorithms, and services, in an open and easily consumable fashion to help business experts, researchers, data scientists and developers work through problems, move ideas forward, and learn from each other along the way.
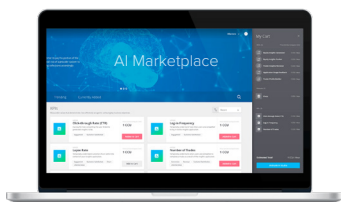
Skills

Skills are a collection of reusable components, such as speech-to-text or sentiment analysis, that encapsulate and extend human cognitive capabilities in software. Skills also provide a number of ML algorithms and a convenient way to harness cognitive services from IBM, Microsoft, Amazon, and Google and to test which services best fit your domain.
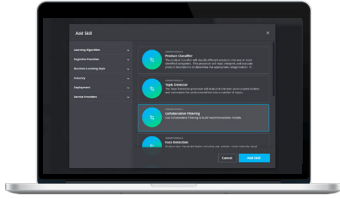
Industry Data

In the AI Marketplace, users will find Industry specific curated datasets including industry entities, events, concepts, linguistic models, and more.
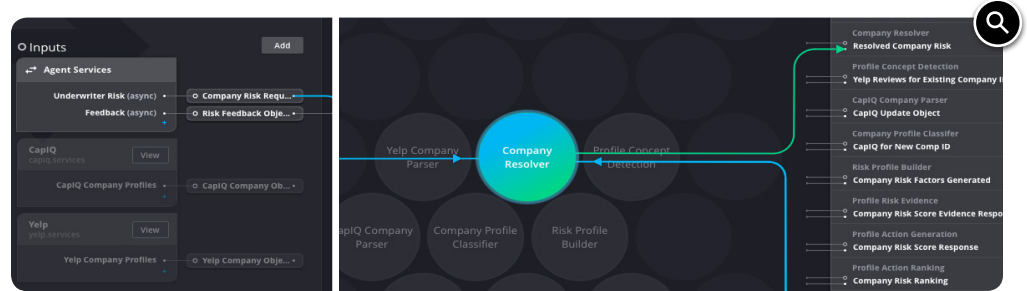
STUDIO

"CognitiveScale is the 'power builder' of cognitive applications and processes, making it easier to integrate cognitive intelligence into any business process and enterprise application."

**Michele Goetz,
Forrester**

2. Develop Using a Visual AI Composition Studio

Cortex Studio is the industry's first visual AI workbench and a key component of the Cortex platform. Cortex Studio helps AI developers, data scientists, ML teams, and business experts rapidly and collaboratively compose, orchestrate and deploy enterprise grade AI.
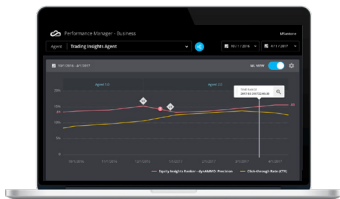

Features

- Visual AI workbench to model and deploy cognitive agents, skills, and processors
- Facilitates cognitive agent building, AI orchestration, feature modeling, continuous learning
- Enables composition of enterprise AI with evidence, explainability, multi-level security
- Helps data scientists to consistently package and expose work for developers
- Enables developers to leverage externally created ML models and datasets
- Provides consistent handling of end user feedback

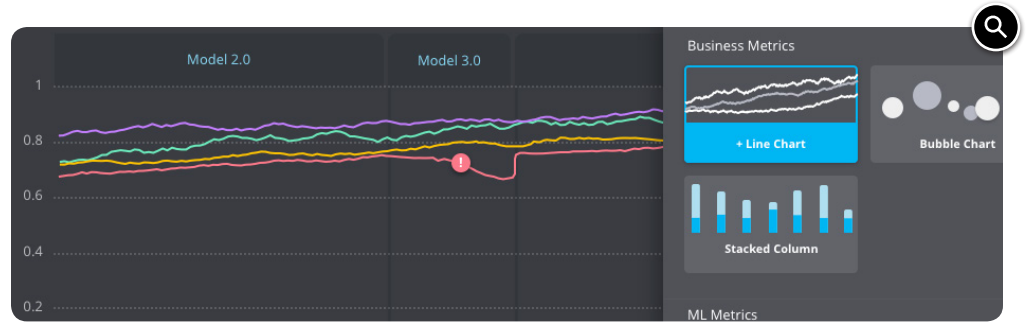## 3. Deploy on Fabric and Manage Performance Responsibly

Cortex Fabric is a highly scalable distributed run-time environment that powers enterprise grade AI. Cortex X-RAI analyzes and optimizes business performance of AI.

Features

- Enterprise AI lifecycle platform for AI developers, data science teams, and business users
- Distributed content runtime to incorporate contextual AI powered insights into new or existing processes, and apps
- Provides consistent development and deployment model
- Proves AI explainability and control
- Delivers multi-modal AI experience through web, mobile, chat, voice, and other interfaces
- Leverages existing Hadoop, Apache Spark, enterprise data warehouses, and data sources
- Leverages existing ML toolkits and cognitive services from IBM, Microsoft, Amazon, and Google
- Stores and accesses curated knowledge to power a number of cognitive applications
- Monitors the business performance of AI agents to provide data scientists and business stakeholders critical context to manage AI agents

CORTEX X-RAI

"CognitiveScale has the most open and complete platform for Cognitive Computing that we have seen."

**Scott Teeple,
CTO Agilify**

ENGAGE AI
AI Powered
Customer Engagement

AMPLIFY AI
AI Powered
Process intelligence

Edge Virtual Appliance*

Compute Node	Data Center HW: Intel 4 core, 16 GB RAM VMware AWS: m4.xlarge, m5.xlarge Azure: B4MS, D4 v3
Storage Node	Data Center HW: SAN AWS: S3 Azure: Azure Blob
Network	• 1 GbE min between nodes • Compute nodes must connect to CS Cloud over SSL/TLS • No inbound connection required
Cluster Size **S**	• 3 node min for HA • Storage min1TB (recommended)
M	• 9 node min for HA • Storage min 1TB (recommended)
L	• 15 node min for HA • Storage min 1TB (recommended)

Enterprise Cloud - AWS*

Compute Node: m4.xlarge, m5.xlarge
Storage Node: S3

Enterprise Cloud - Azure*

Compute Node: B4MS, D4 v3
Storage Node: Azure Blob

*Scales horizontally, auto-scaling

Operate and Optimize with AI Agents

Operate and Optimize with AI Agents
CognitiveScale offers a family of trained and proven AI software agents that deliver AI-powered personalization for consumer engagement (Engage Agents) and AI-powered process intelligence (Amplify Agents). These agents are delivered as a service and built and managed by the Cortex AI Platform for enterprise grade AI performance and assurance.

Engage: AI Powered Customer Engagement
Ready-to-use insight and process models to power use cases around customer engagement and personalization:

• Capture machine-accumulated knowledge for individualized real-time view of every customer from all available data

• Deliver personalized digital experiences through recommendations and hyper-personalized next best offers and feeds

• Support multi-way communications and experiences between object and brand, object and consumer, and consumer-to-consumer

Amplify: AI Powered Process Intelligence
Ready-to-use insight and process models to power use cases around exception handling and employee decision support:

• Anticipate, detect, and resolve anomalous or exceptional conditions in back office activity and suggest next best actions to employees

• Improve employee situational awareness leading to improved decision-making by gathering and analyzing evidence from internal and external data

• Explore, understand, and highlight relationships between policies, people, and assets across multiple organizational silos to drive compliance and reduce risk-related costs

• Self-learning, self-assuring business processes through machine intelligence

Flexible Deployment Models

Cortex SaaS Edition
Design, host, run, and manage your AI systems in our secure public cloud. Skip buying, installing, operating, or maintaining servers

Stand alone environment:

• End to end AI lifecycle management in our cloud

• Encompasses data, models, skills, and agents

• Design, compose, deploy, manage from our cloud

CognitiveScale Cloud

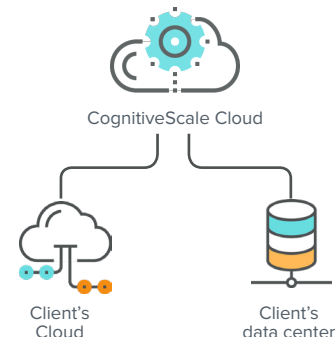### Cortex Edge Edition:
Authored and managed in our cloud with compute in an Edge Virtual Appliance in your cloud or data center environment.

• Distributed AI lifecycle management for additional flexibility

• Data, models and run-time in client's cloud or data center

• Compute in your cloud, design,compose, and manage in ours

CognitiveScale Cloud

Client's Cloud

Client's data center

CognitiveScale

Competitive Comparison Matrix

Typical machine learning toolkits and data science platforms lack end-to-end AI lifecycle management capabilities and require hard-to-find data science expertise. CognitiveScale's Cortex Platform radically simplifies design, development, delivery, and management of enterprise grade AI systems that weave knowledge and learning across the enterprise-from the front office to back office to mission critical core functions.

	Software Category	Advantage	CORTEX AI Platform	Data Science Platform	Cognitive Toolkits, APIs
DESIGN	Industry optimized Pre-built AI products	Simplifies and accelerates design, development, delivery, and management of enterprise Augmented Intelligence systems	Fully		
	Cognitive Agents & Skills	Harness a library of pre-packaged cognitive skills to accelerate development. Build and share new skills with your team	Fully		
	Industry Heatmaps & Graphs	Machine curated knowledge and learnings across AI deployments	Fully		
	Simulation & Model Fit	Interactive simulation and testing of AI agents to incrementally determine the best combination of models for the target	Fully	Partial	Partial
	Integration with Existing Investments	Integration with market leading data science toolkits and platforms to bridge data science work-flow with cognitive	Fully	Partial	Partial
	Data Connectivity	Open and extensible data fabric to connect to 1st party and 3rd party datasets	Fully	Fully	Partial
RUN	Orchestration	Orchestrate machine learning models, AI technical services, and knowledge curation without custom glue code across data, intelligence, and experience layers	Fully	Partial	Partial
	Profile-of-One	Easily configure and deploy hyper-personalization	Fully		
	Feedback Loop	Automate the incremental improvement of AI agents	Fully		
MANAGE	Explainability & Auditability	Generate insights and recommendations with reasons and evidence to drive better user adoption/ personalization and provide transparency for regulatory requirements	Fully		
	Support for Human Native Interfaces	Deploy AI agents that power voice, conversational, AR/VR experiences in addition to traditional web/ mobile applications	Fully		
	Built in KPI-centric Monitoring	Monitor the performance of multiple alternative models within a model orchestration to assess how they may contribute / degrade to achieving a high level KPI	Fully	Partial	Partial
	Control & Assurance	Ensure the continuous learning of the system is aligned to the goals of the organization and compliant with local regulations	Fully		
	Enterprise Scale	Secure, reliable, manageable, to scale algorithmically and computationally for the world's largest enterprises	Fully	Partial	Partial

Fully Supported ✓   Partially Supported ✓

CognitiveScale is an augmented intelligence pioneer that pairs humans and machines to bring practical, scalable, and trusted AI solutions to life. MD Anderson, NBC Universal, and JPMorgan Chase are among the top global innovators that trust CognitiveScale to transform customer engagement and make business processes intelligent. CognitiveScale's award-winning and proven Cortex software and expert teams empower financial services, digital commerce and and healthcare organizations to radically simplify the development, deployment and management of their AI systems. Whether they are personalizing investor, customer, patient, or member experiences or optimizing the processes it takes to serve them, our clients are creating a better future for all.

CognitiveScale is #1 in AI patents among privately held companies and #4 overall since 2013. The company is headquartered in Austin, Texas and has offices in New York, London and Hyderabad. Investors include Norwest Venture Partners, Intel Capital, IBM Watson, M12 (Microsoft Ventures), and USAA. CognitiveScale is recognized by the World Economic Forum as well as top industry analysts for positively impacting business and society with AI.