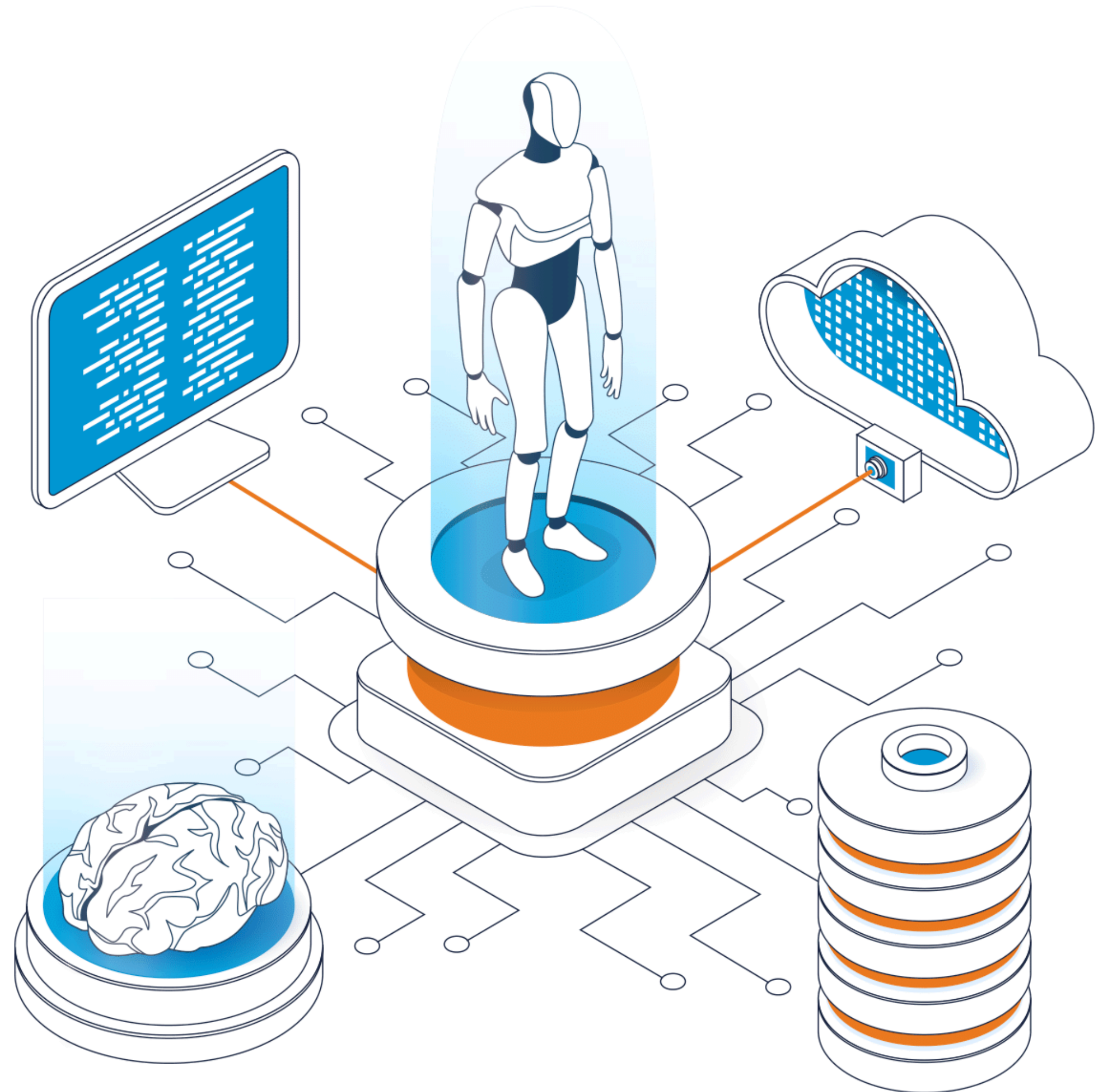


The Four Waves of AI

This resource is part of our upcoming report, 'Implementor's Guide to AI', which is designed to be a practical toolkit for business leaders to help them navigate the complexities of AI implementation. This precursor text is meant as a working framework outlining the evolution of AI technology, followed by a glossary of key terms and abbreviations.

[Participate in the Survey and contribute to the report](#)

[Take Survey Now](#)



Evolution, Applications, and a Quick Guide for Implementors

As we progress in our journey to understand AI for business, it is of prime importance that we learn about the evolution of AI, use cases, best practices and challenges. This ready reckoner highlights our learnings before we share the 'Implementor's Guide to AI', which is coming shortly after. The goal of this ready reckoner is to equip businesses, tech leaders, and operational teams with the insights and resources they need to effectively adopt and scale AI initiatives within their organisations.

The Four Waves of AI

Wave 1



Data-Driven Insights and the Rise of Predictive AI
Late 1990s to early 2010s

Wave 2



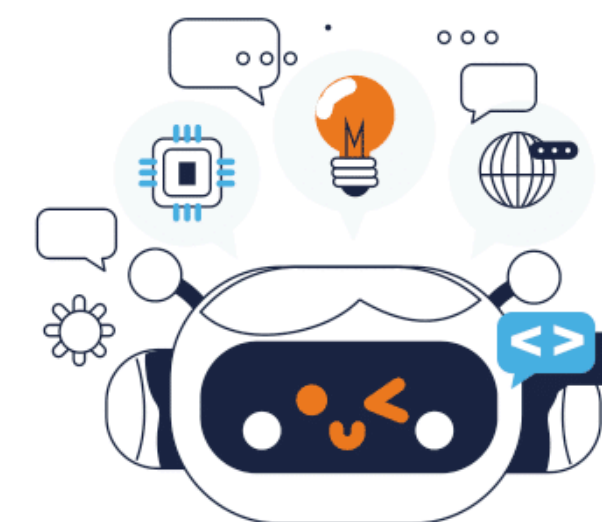
Generative AI and Conversational Intelligence
Mid-2010s to early 2020s

Wave 3



Agentic AI and Autonomous Agents
Early 2020s to present

Wave 4



General Artificial Intelligence
Early 2030s (Predicted)

First Wave: Data driven insights and the rise of Predictive AI

In its early phase, AI systems functioned as 'black boxes,' processing vast amounts of data to generate insights. However, these systems needed more transparency, necessitating the rise of data scientists to interpret results and align them with business goals.



Timeline: Late 1990s to early 2010s



Key Technologies: Machine learning algorithms like support vector machines, decision trees



Achievements: Growth of predictive analytics in finance and marketing; development of recommendation engines in e-commerce



Challenges: Opaque algorithms, limited accessibility for non-technical users



Second Wave: Generative AI and Conversational Intelligence

The second wave saw the rise of rule-based AI systems and bots, designed for specific functions like customer service. This marked the beginning of human-AI interaction through chatbots and virtual assistants. However, organisations often developed their own large language models (LLMs), leading to fragmentation.



Timeline: Mid 2010s to early 2020s



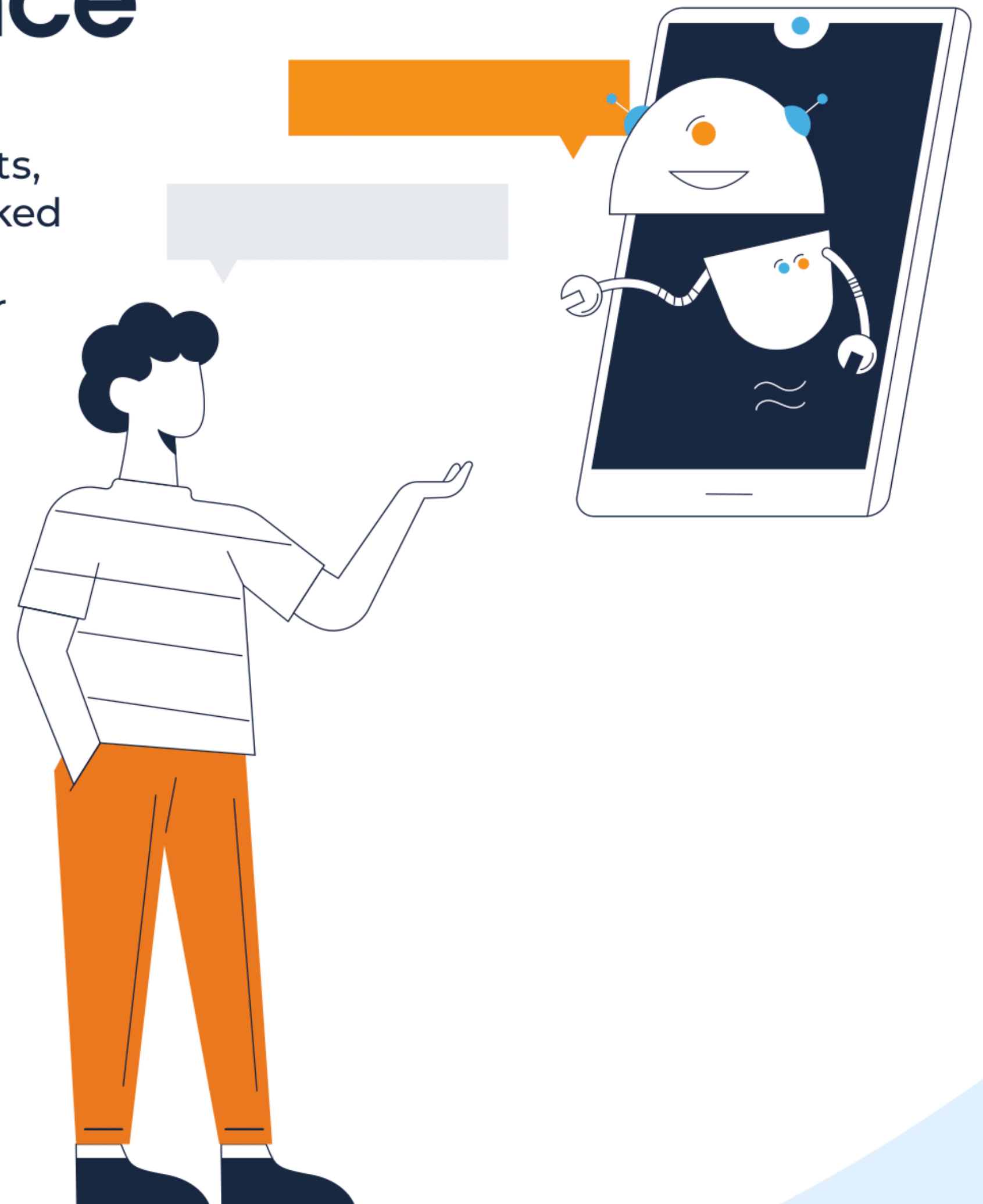
Key Technologies: Natural Language Processing (NLP), virtual assistants



Achievements: Introduction of AI-driven conversational agents like Siri and Alexa; enhanced customer engagement through chatbots



Challenges: Limited generalisation of bots, resource-intensive development of custom LLMs



Third Wave: Agentic AI and Autonomous Agents

Today, AI has evolved into an agentic role, where it acts as an autonomous agent capable of managing complex tasks and learning from interactions. Platforms now host advanced LLMs, enabling AI to adapt to new situations, connect with human experts when necessary, and improve continuously.



Timeline: Early 2020s to present



Key Technologies: Reinforcement Learning, Large Language Models (LLMs)

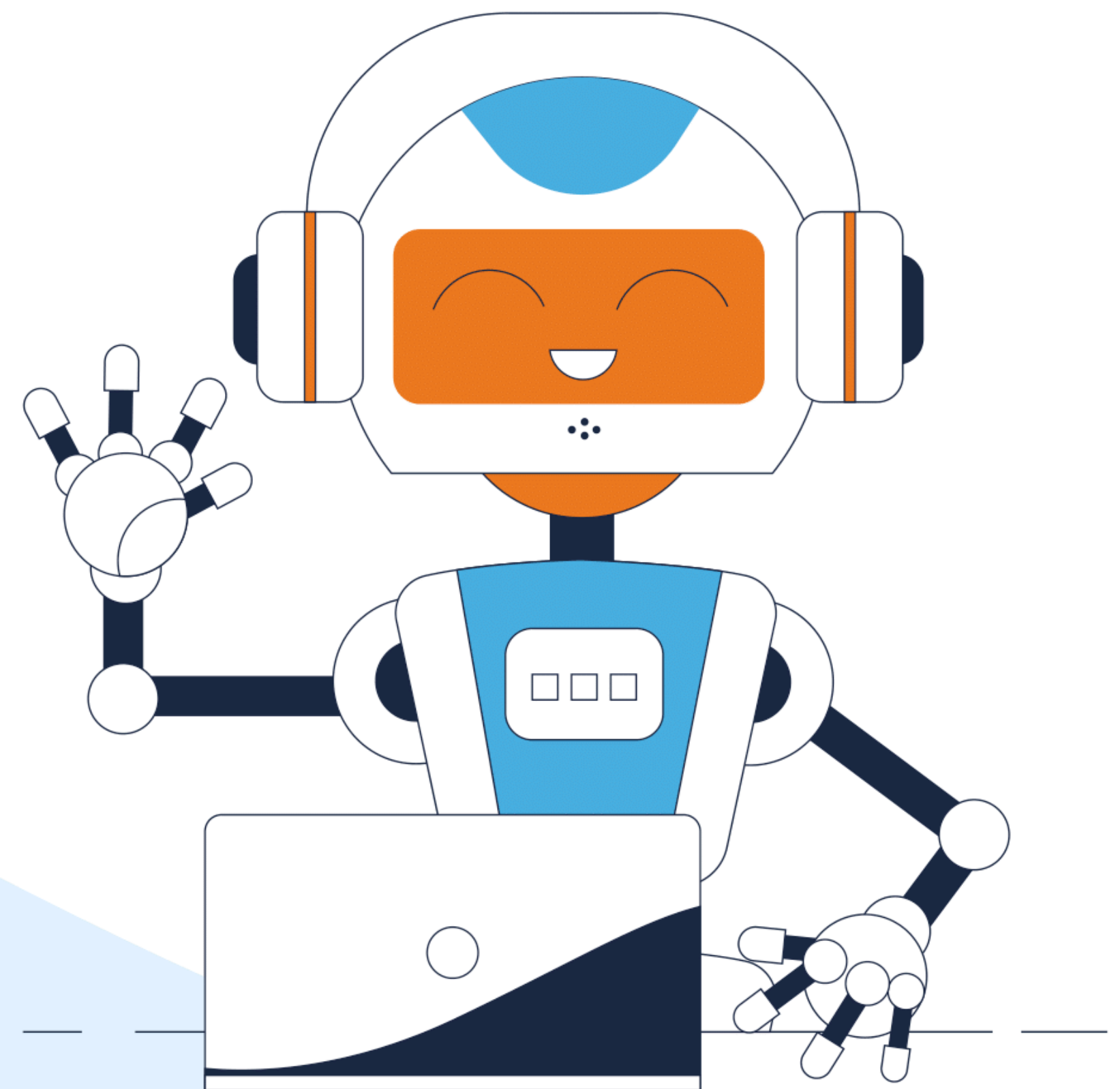


Achievements: Deployment of AI agents capable of self-learning; integration of AI across enterprise platforms for efficiency and scale



Challenges: Ethical considerations, data privacy, ensuring responsible AI behavior

HI THERE!



Fourth Wave (Predicted): General Artificial Intelligence

The future lies in General Artificial Intelligence, where AI systems exhibit human-like intelligence and are able to reason, solve complex problems, and autonomously manage tasks without human intervention.



Timeline: 2030s onwards (predicted)



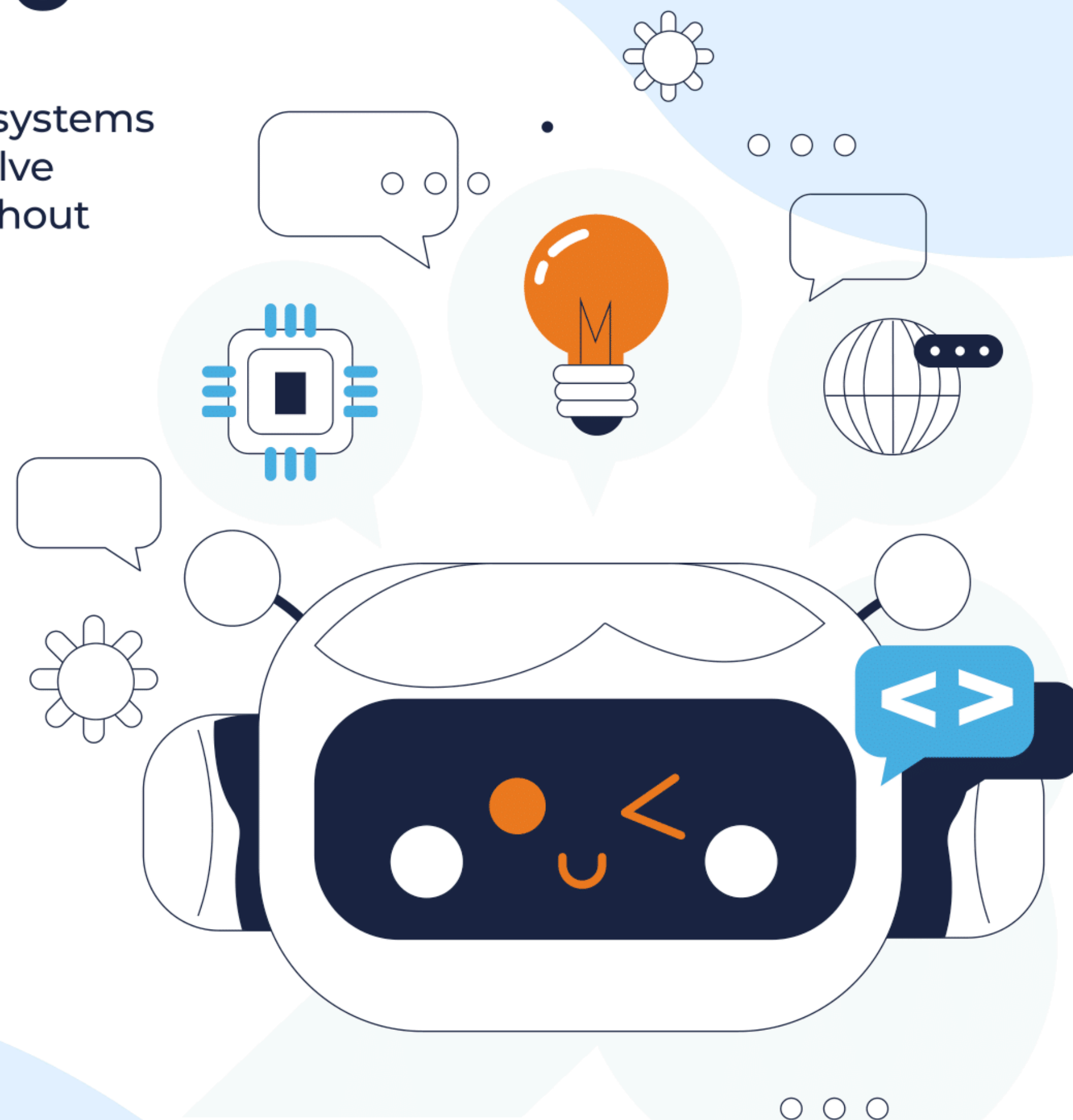
Key Technologies: Advanced multi-agent systems, neural-symbolic computing



Achievements: AI-to-AI collaboration, solving interdisciplinary challenges



Challenges: Ensuring ethical behavior, avoiding unintended consequences



AI Glossary: A Ready Reference for Implementors

To further empower businesses, we've curated a detailed glossary of AI terminology, spanning critical functions:

Business Terms



- **Artificial Intelligence (AI):** Machines simulating human intelligence.
- **Generative AI:** AI capable of creating content such as text, images, or videos creatively.
- **Explainable AI (XAI):** Set of methods and processes that help humans understand the output of machine learning. This results in transparent AI systems whose results highlight potential biases, accuracy, fairness, and transparency.
- **Ethical AI:** Ensuring AI adheres to moral and legal standards. Ethical AI is Artificial Intelligence developed and used in a way that respects fundamental values and human rights.
- **ROI of AI:** Measuring the impact - usually financial - of AI deployments on business.





Operations Terms

- **Hyperautomation:** Automating end-to-end workflows using AI and analytics.
- **Digital Twin:** Virtual representations of physical systems for simulation.
- **Model Drift:** Gradual degradation in AI performance due to changing data patterns.
- **AI Ops:** AI-driven IT operations management.
- **Federated Learning:** Training AI models without centralised data collection.



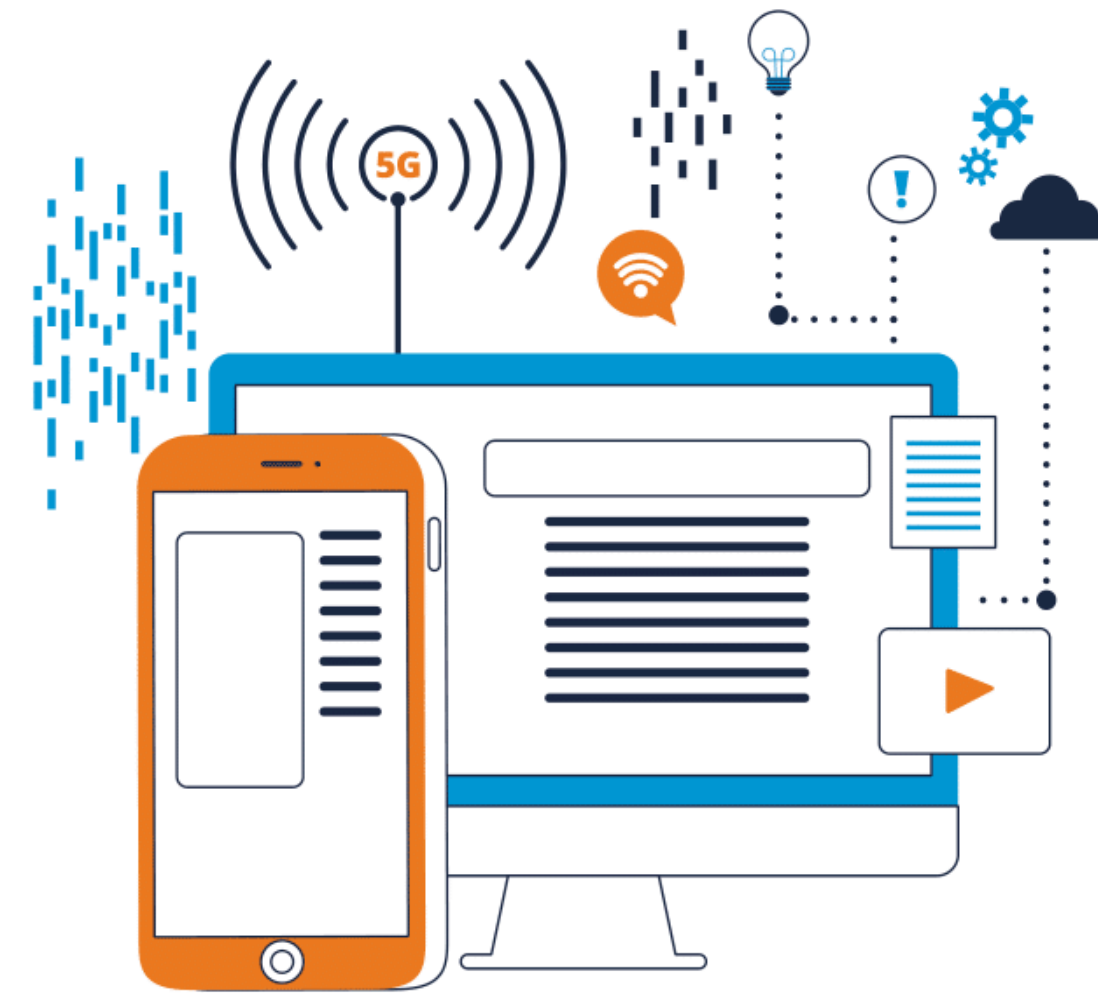
Customer Success Terms

- **Conversational AI:** AI designed for humanlike dialogue (e.g. chatbots).
- **Sentiment Analysis:** Detecting customer emotions and feedback trends.
- **Proactive Engagement:** Predicting and addressing customer needs in real-time.
- **Intent Recognition:** Identifying user goals during interactions.
- **Feedback Loop:** Using customer data to refine AI algorithms.



Sales Terms

- **Sales Forecasting:** Predicting revenue using AI-based analytics.
- **Lead Scoring:** Prioritising leads based on their likelihood to convert.
- **Dynamic Pricing:** Adjusting prices in real time using AI.
- **Voice AI:** Analysing sales calls for performance insights.
- **Hyperpersonalisation:** Customising sales strategies at the individual level.



Technology Terms

- **Natural Language Processing (NLP):** Machines understanding and generating human language.
- **Large Language Models (LLMs):** Advanced AI models like GPT.
- **Edge AI:** Running AI on local devices for faster processing.
- **Knowledge Graph:** Structured representation of information for AI learning.
- **Reinforcement Learning:** Training AI agents through trial-and-error optimisation.

Building a Shared AI Future

This ready-reckoner is just the beginning. It sets the stage for a series of resources designed to make AI practical and accessible for businesses. As the first in our 'Implementor's Guide to AI' series, it's meant to spark curiosity, provide clarity, and inspire action. We hope it educates and empowers readers to see the incredible possibilities AI can bring to their organisations.



About Our Report: 'Implementor's Guide to AI'

The 'Implementor's Guide to AI' is a comprehensive framework designed to help businesses harness the transformative power of AI. Sponsored by Salesforce, this report provides actionable insights, best practices, and step-by-step guidance for implementing AI across business functions.

What to Expect:



Strategic Frameworks:

Insights into aligning AI with business goals.



Best Practices:

Proven methodologies for deploying AI effectively.



Case Studies:

Real-world success stories to inspire implementation.



Glossary and Tools:

Resources like this glossary to simplify AI adoption.