Masood Alam

When Data Starts Talking Back: The Rise of Conversational Intelligence

What If Data Could Answer You?

CDO Exchange | BigDataLDN | Data Revolution | Constellation Framework | TechEx | Business-Insider Top10 AI

The Vision That Became Conversational Intelligence

Yesterday
We imagined speaking to computers as naturally as we speak to each other.

Today
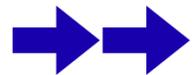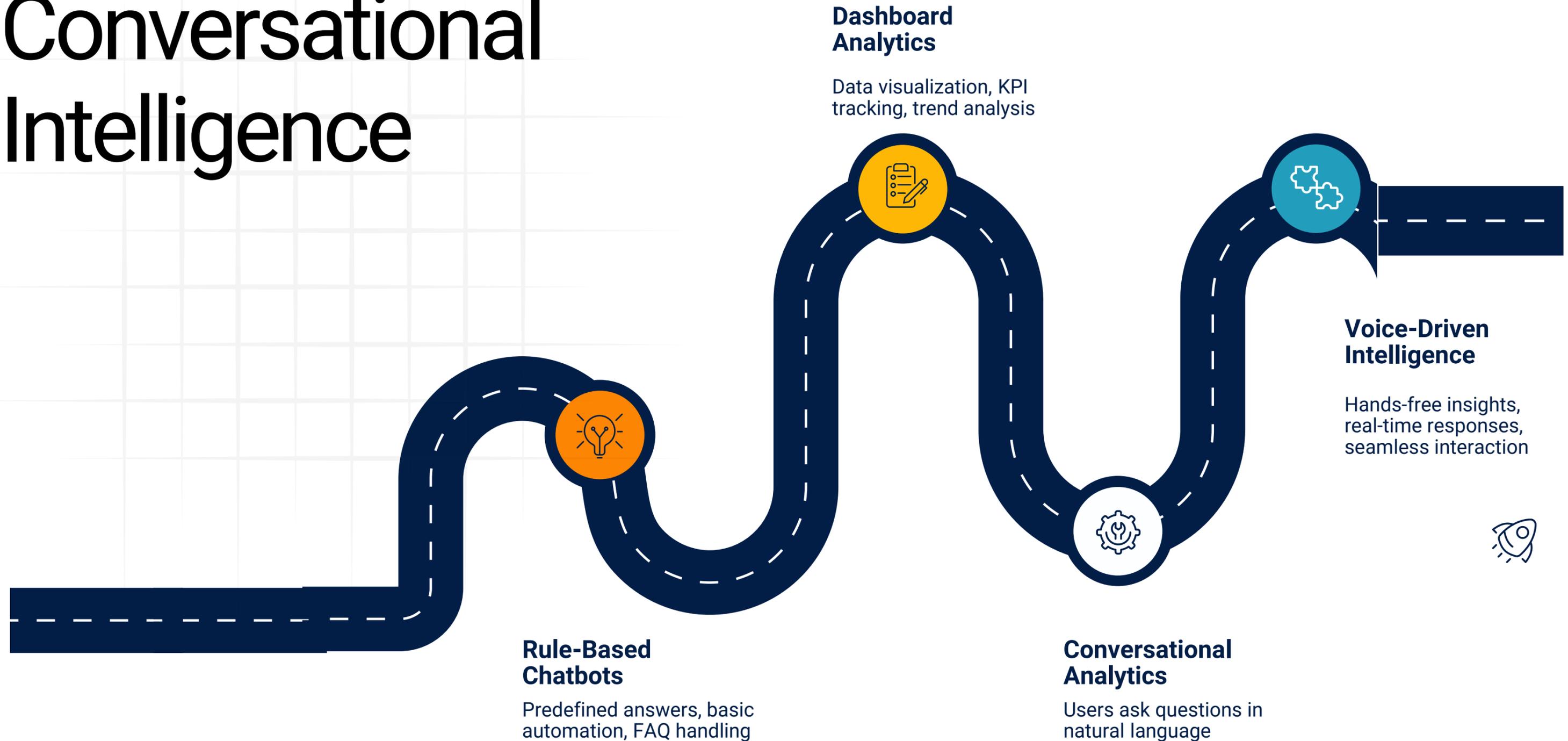Machines understand language, context, and intent.

Tomorrow
Conversational systems become the front door to services, knowledge, and decision making.

Sundar Pichai | The next big step in computing is a natural, conversational way to interact with devices.

Stages of Conversational Intelligence

Dashboard Analytics

Data visualization, KPI tracking, trend analysis

Voice-Driven Intelligence

Hands-free insights, real-time responses, seamless interaction

Rule-Based Chatbots

Predefined answers, basic automation, FAQ handling

Conversational Analytics

Users ask questions in natural language

The evolution shows a shift from structured systems to natural human interaction, making data increasingly accessible and intelligent.

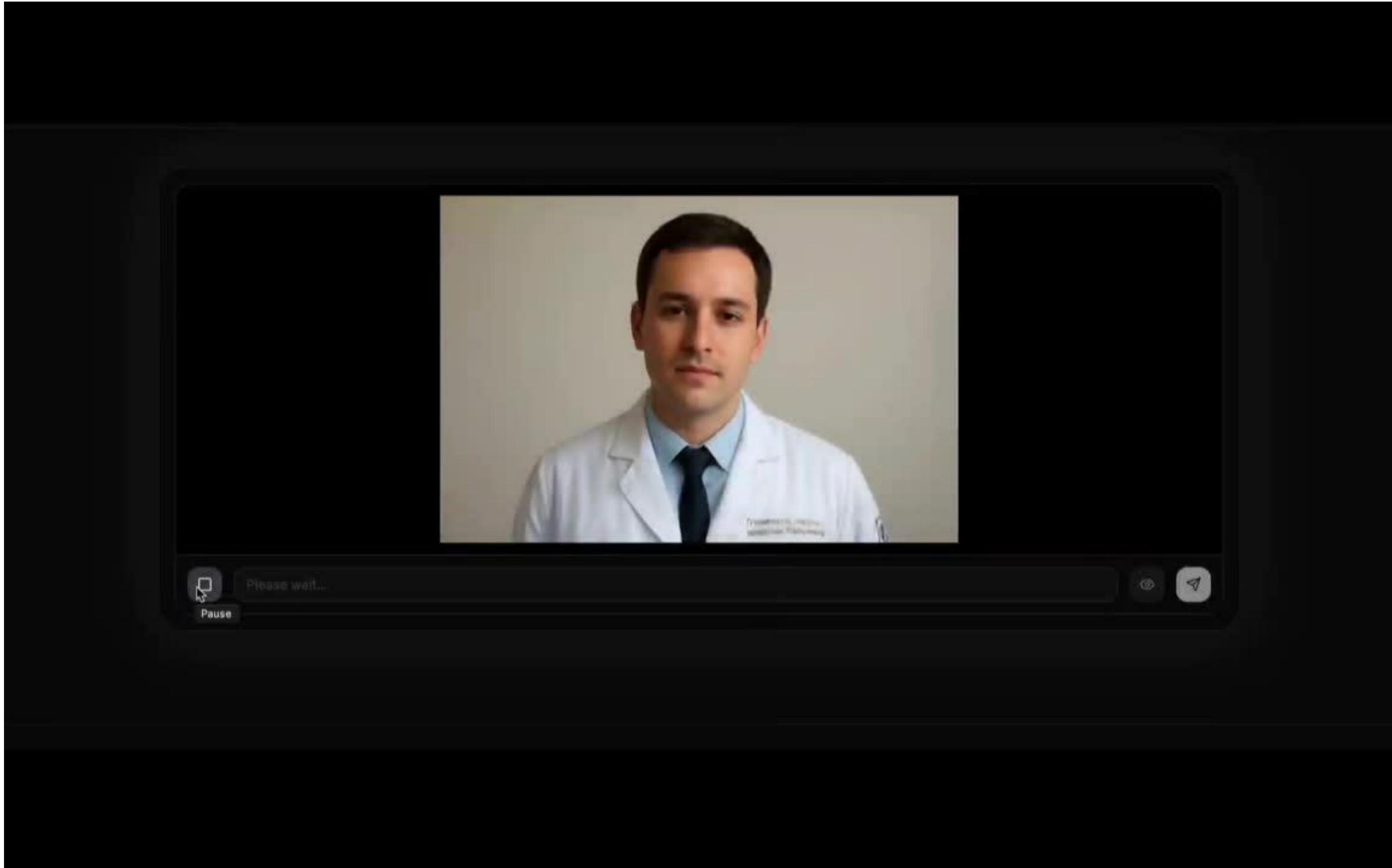# Conversational Intelligence Demo (Flight Data)
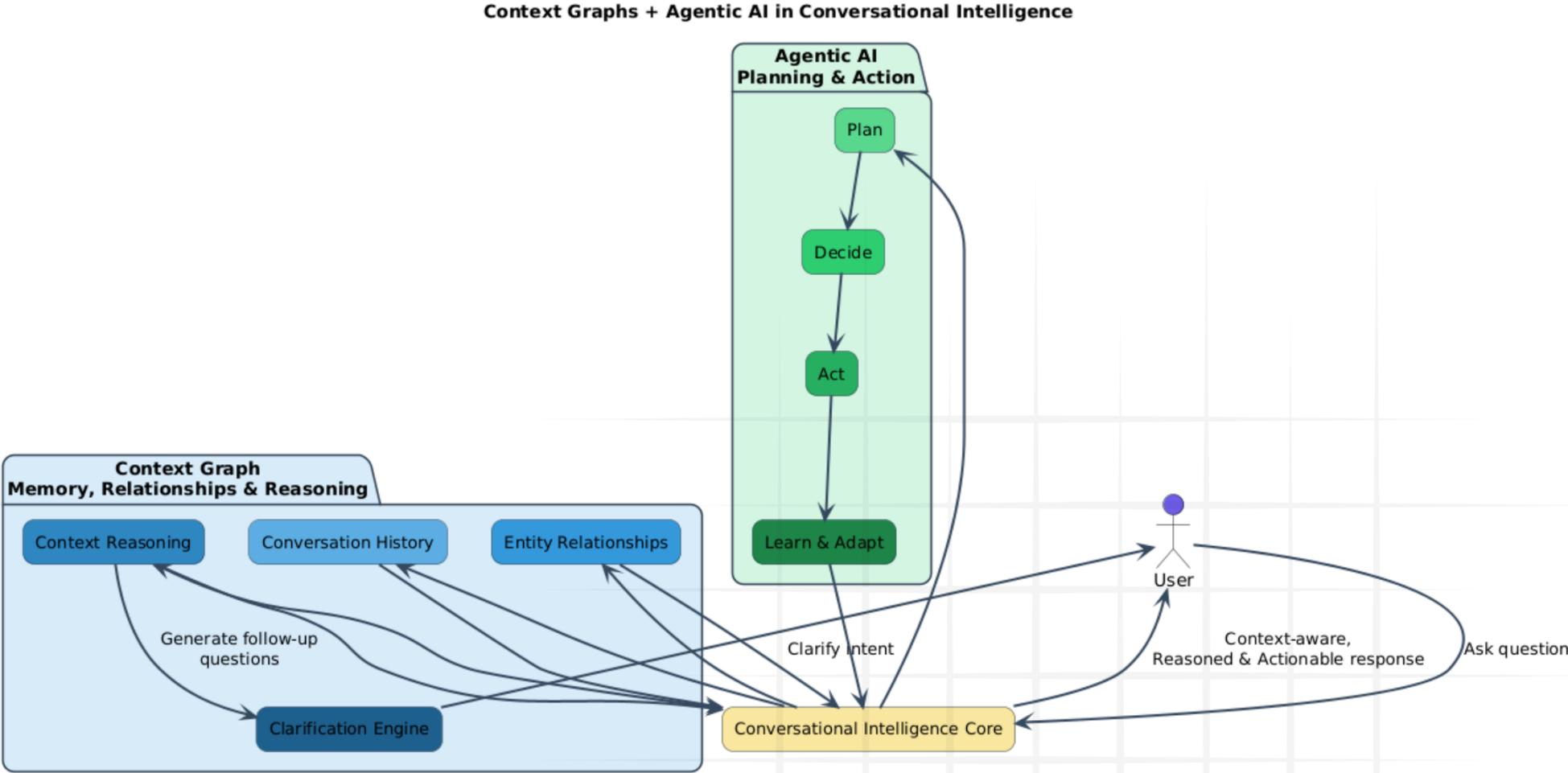# Scenario: Chat To Data

Conversational Intelligence demo (Hospital Data)

Scenario: Talk To Data

Context Graphs and Agentic AI: Powering Intelligent Conversations

Context Graph	Agentic AI
Stores relationships and history	Plans multi-step tasks
Understands context across interactions	Makes informed decisions
Reasons over connected information	Executes actions autonomously
Asks clarifying questions	Learns and adapts from outcomes

Context Graphs + Agentic AI in Conversational Intelligence

Agentic AI Planning & Action
- Plan
- Decide
- Act
- Learn & Adapt

Context Graph Memory, Relationships & Reasoning
- Context Reasoning
- Conversation History
- Entity Relationships
- Generate follow-up questions
- Clarification Engine

Clarify Intent

User

Conversational Intelligence Core

Context-aware, Reasoned & Actionable response

Ask question

Power of Context Graphs
- Connect related entities, topics and interactions
- Enable deeper reasoning across linked information
- Enhance relevance and coherence in responses

Context Graph Capabilities
- Maintain structured relationships between data and users
- Support contextual understanding beyond single queries
- Generate clarifying questions to refine intent

Building Conversational Memory
- Preserve history across interactions
- Track user preferences and previous goals
- Strengthen continuity in multi-step conversations

The Business Value of Conversational AI

Democratizes data access

Enables people across an organisation to access and understand data without requiring advanced technical skills.

Faster decision-making

Provides immediate insights, allowing teams to respond swiftly to changes and opportunities.
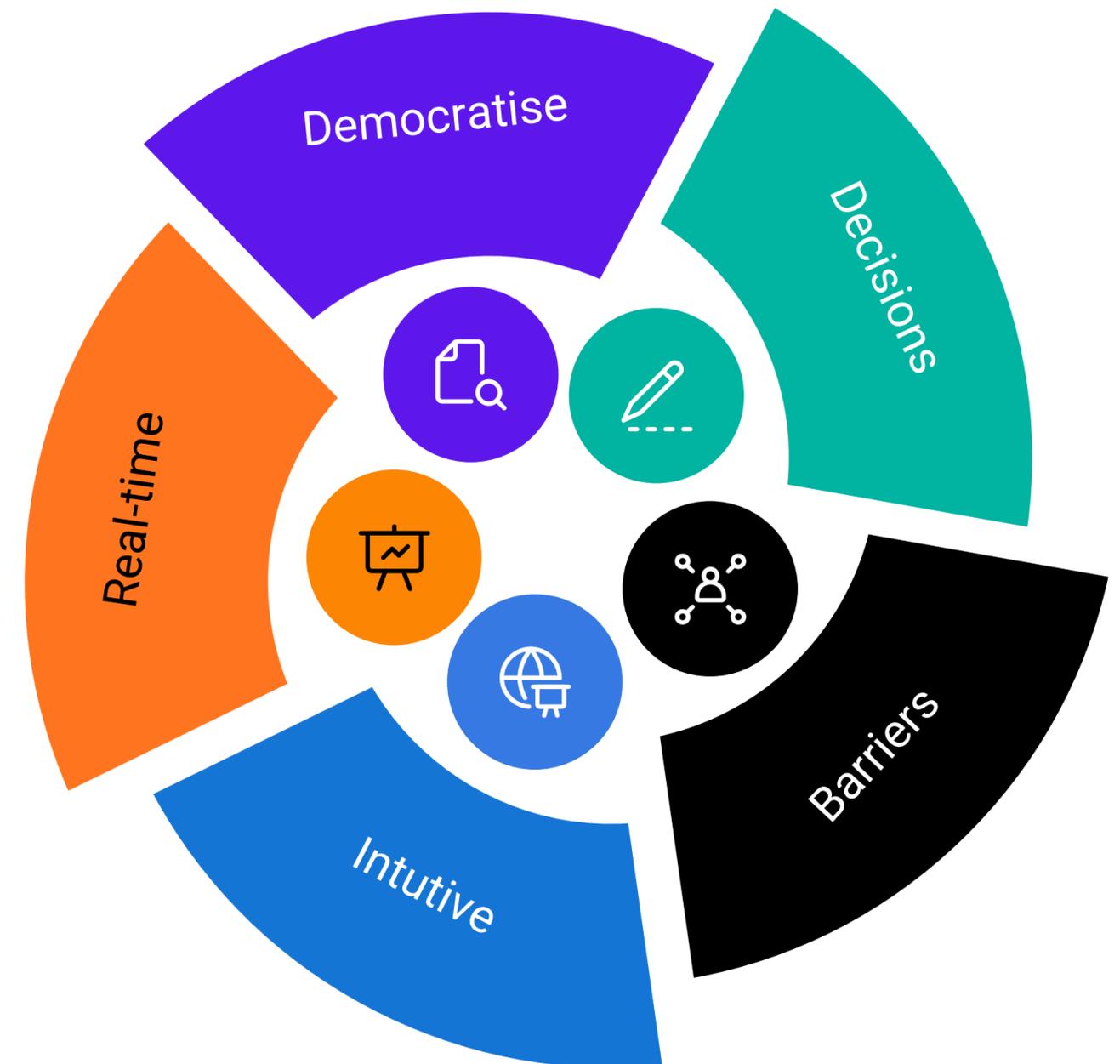
Reduced technical barriers

Removes the need for complex queries or specialist tools by enabling natural language interaction.

More intuitive user experience

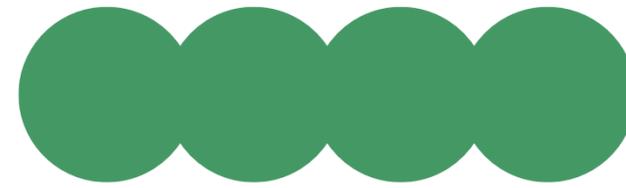Offers a seamless, human-like way to explore information through conversation.

Real-time insights

Delivers up-to-date analysis as new data becomes available.

Conversational intelligence changes the way people interact with technology, making digital systems more natural, accessible and responsive to human needs.

Human Out Of The Loop

- **Up to 50% of entry-level** white-collar roles could be automated within five years, particularly in routine data and administrative work.

Source: AI Multiple Research

https://research.aimultiple.com/ai-job-loss/

- **AI and automation** may displace around 6% of US jobs by 2030 (over 10 million roles) due to structural automation trends.

Source: Forrester

https://www.forrester.com/blogs/ai-and-automation-will-take-6-of-us-jobs-by-2030/

- **Routine roles such as customer service**, data entry, bookkeeping and scheduling are among the most vulnerable to automation.

Source: Nexford University Analysis

https://www.nexford.edu/insights/how-will-ai-affect-jobs

- **One in six employers** expect AI to result in job losses, with some predicting workforce reductions of 10% or more.

Source: CIPD / People Management

https://www.peoplemanagement.co.uk/article/1939164/one-six-employers-expect-job-losses-ai-cipd-finds

- **Generative AI could impact up to 300 million** full-time jobs globally, particularly in administrative and knowledge roles.

Source: Goldman Sachs Report

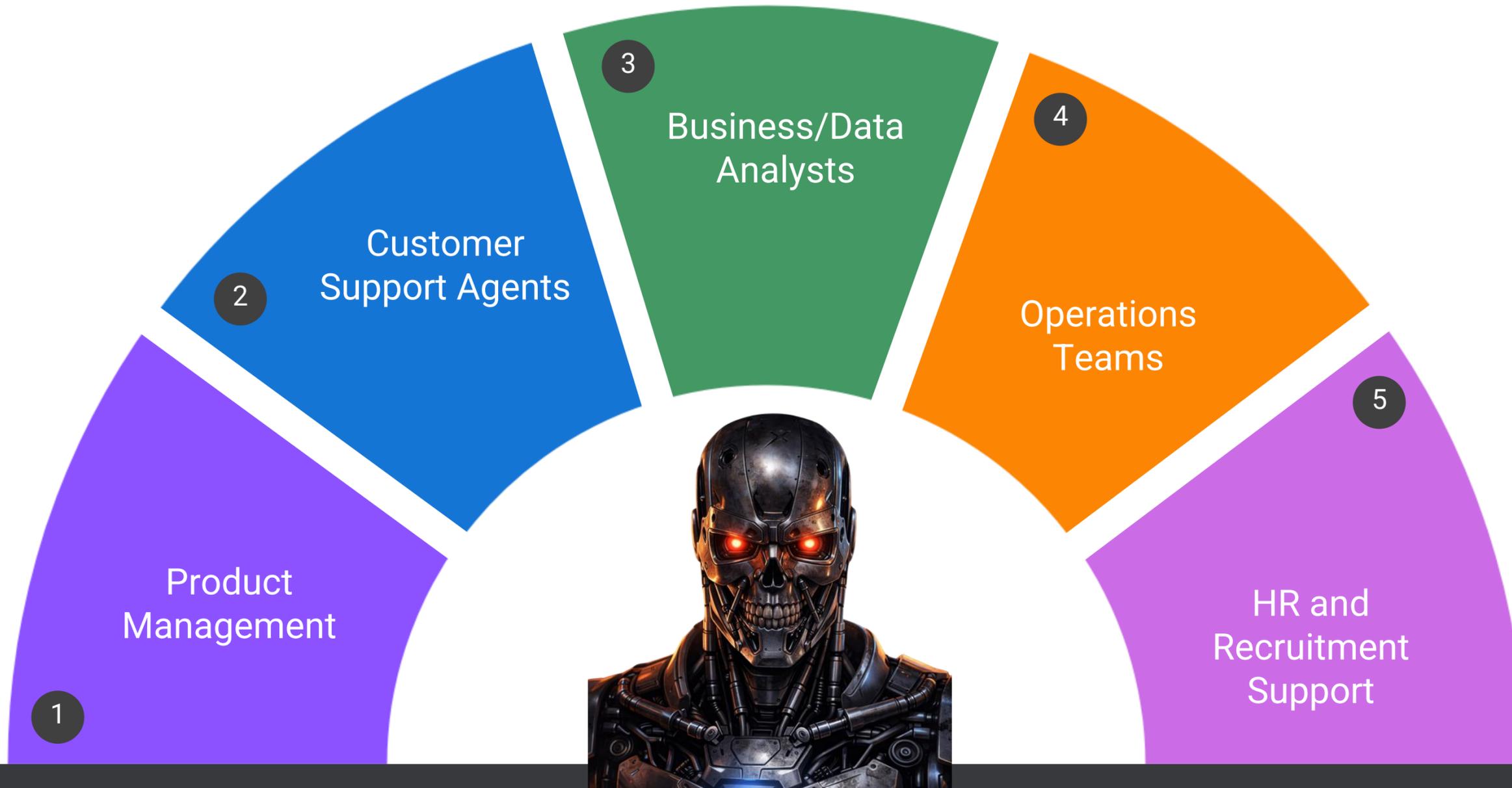https://www.goldmansachs.com/insights/articles/generative-ai-could-raise-global-gdp-by-7-percent
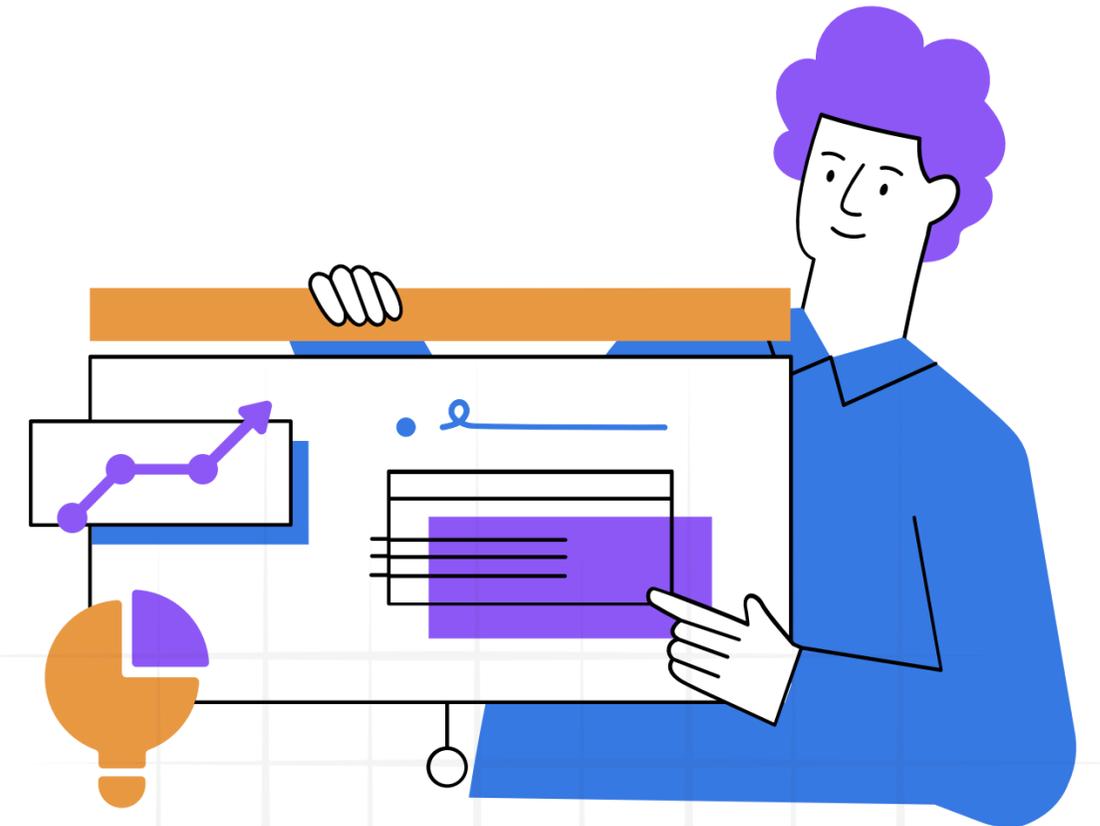
Around 10 million U.S. jobs by 2030

1–3 million UK jobs by 2035

The Rise Of Machines
Roles Most Likely to Be Transformed by Conversational Intelligence

3 Business/Data Analysts

2 Customer Support Agents

4 Operations Teams

1 Product Management

5 HR and Recruitment Support

Masood
Alam

Thank You

- +44 7825 018241

- masood@resolve.haus

- https://www.resolve.haus/

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