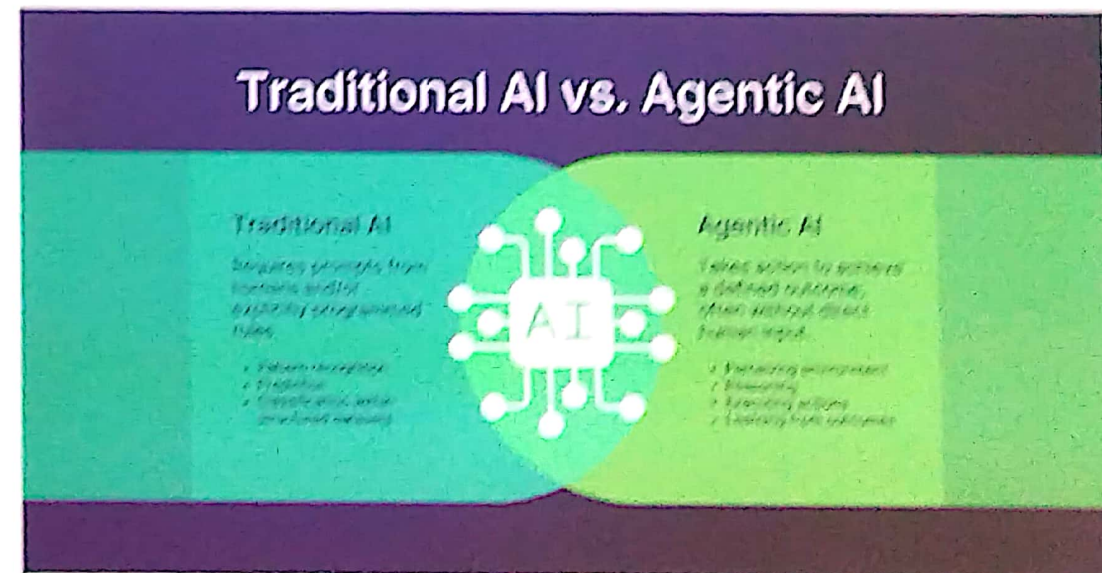


Agentic AI: How is it Different?

* Agentic AI refers to *AI systems capable of autonomous, goal-directed behavior*—planning, taking actions, interacting with tools, and iterating without waiting for humans. This shifts AI from *assistive automation* → *autonomous task execution*.

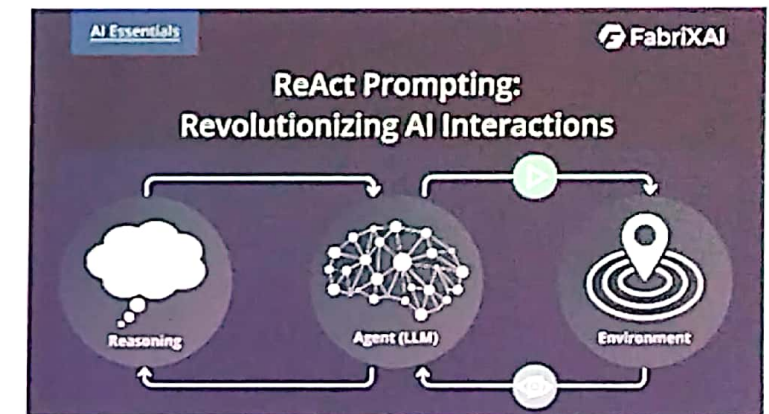
- Has goals and sub-goals
- Has long-term memory
- Can take actions using tools/APIs
- Can self-reflect and self-correct
- Works in multi-step workflows
- May collaborate with other agents



Agentic AI: How It Matters?...

Three Inflection Points:

1. LLMs + reasoning frameworks (ReAct, Tree-of-Thoughts)
2. Tool ecosystems (APIs, plugins, robotic interfaces)
3. Memory/knowledge graphs enabling continuity



AI (2020–2024)

Answering

Insights

One-shot tasks

Static output

Human controls every step

Agentic AI (2025–2027)

Doing

Execution

Multi-step tasks

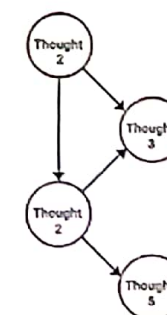
Continuous loops

AI initiates next step

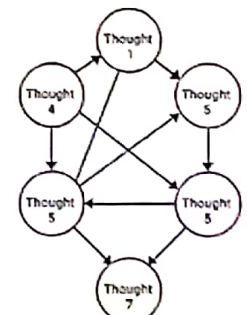
CHAIN-OF-THOUGHT



TREE-OF-THOUGHT



GRAPH-OF-THOUGHT



Agentic AI: Real or Hype?

- * We are in Early Commercial Deployment.
- * Tendency of Hype. But, not hype—delivering value in customer support, operations, RPA augmentation, devops automation, and content workflows.

Where It Is Most Applicable Today:

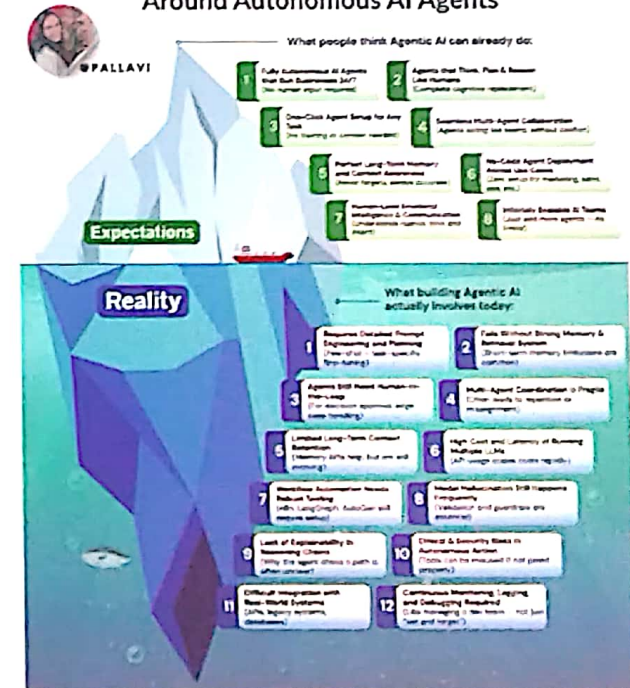
- Customer service → Autonomous triage & resolution agents
- Software engineering → Code agents + CI/CD automation
- Manufacturing → Intelligent RPA agents & digital twin feedback loops
- Business workflows → Research agents, sales ops, compliance agents
- Healthcare → Documentation agents, diagnostic assistance
- Financial services → Risk evaluation, process automation

Where It Is NOT Yet Mature:

- High-stakes autonomous decision-making
- Robotic autonomy in unstructured environments
- Fully unsupervised operations for regulated industries

Agentic AI Iceberg

Expectations vs Reality – Clearing the Hype Around Autonomous AI Agents



Agentic AI: Early Instances in Industry

* Microsoft—AutoDev Agents

- Azure AI Agents: code debugging, test generation, dependency management. Internal teams report 20–40% cycle time reduction.

* Google—Project Astra

- Multimodal agents that perceive, reason, and act using cameras, environment context, and action APIs.

* Amazon—Autonomous Support Agents

- Amazon uses GenAI agents to auto-resolve 35–50% of customer issues without human escalation.

* Shopify—Commerce Agents

- Agents manage listings, customer Q&A, supply chain queries, and marketing copy.

* Startups

- Devin (Cognition Labs): “AI software engineer” executing multi-step coding tasks.
- Adept AI: Action-taking agents that operate SaaS tools (Excel, Salesforce).
- Sanctuary AI / Figure AI: Embodied agents for robotics (still early).

* Enterprise Integrators

- ServiceNow Now Assist Agents automating IT/workflow operations

Key Benefits of AI Agents in Real-Life Business Applications



Increased
Efficiency



Data-Driven
Insights



Improved
Customer
Experience



Error Reduction



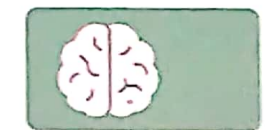
Cost
Savings



Scalability



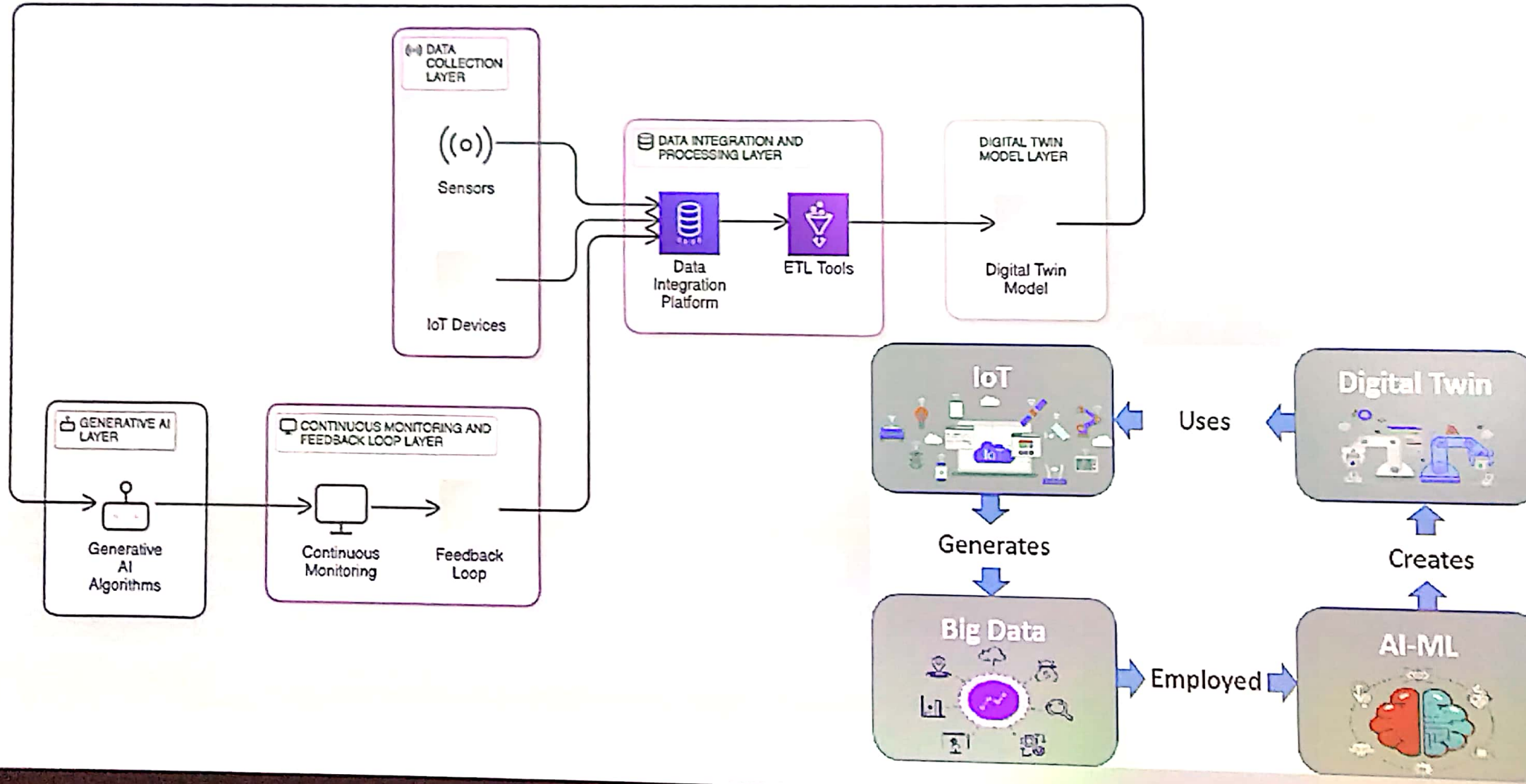
Adaptability



Continuous
Learning

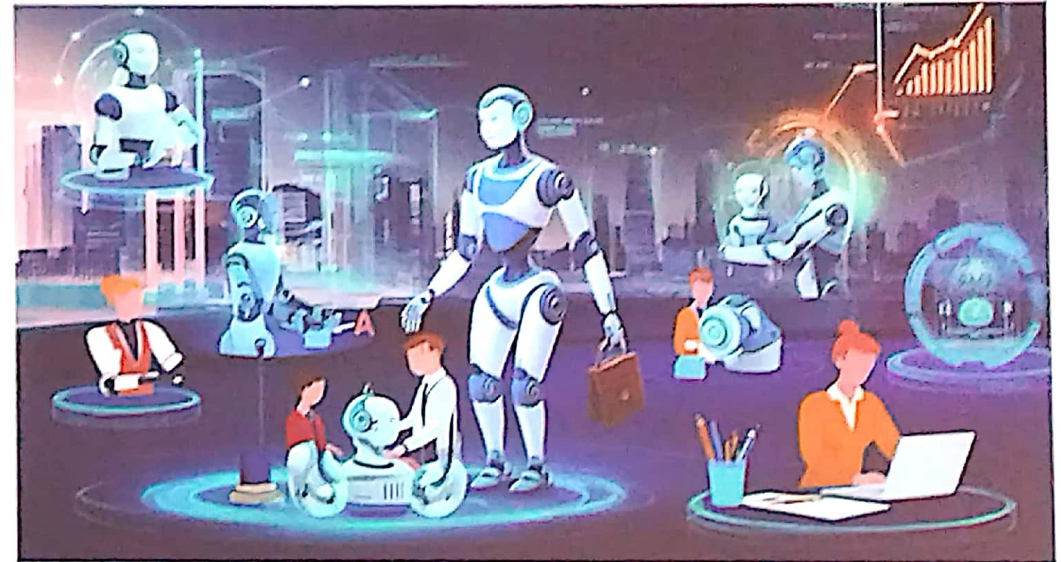
Relationship of IoT, Big Data, AI-ML and Digital Twin

Integration of Generative AI and Digital Twins



Agentic AI: What Tasks are @High-Risk?

- **Routine information manipulation**
 - data entry, reconciliation, reporting
- **First-level cognitive tasks**
 - summarization, drafting responses, basic analysis
- **Repetitive digital workflows**
 - CRM updates, scheduling, tagging, filtering
- **Low-complexity content creation**
 - social posts, SEO blogs, product descriptions
- **Testing & QA tasks**
 - repetitive scenario testing, regression...



Roles with Significant Automation Pressure (Partial or Complete):

- BPO/Customer support
- Back-office operations
- Junior analysts
- Junior programmers (basic CRUD-level dev)
- Documentation-heavy jobs (legal ops, medical scribes)

Agentic AI: What New Avenues Opening?

- AI Workflow Designers, Agent Orchestrators
- Prompt Engineers → Task Engineers → Goal Engineers
- Data + Knowledge Graph Architects
- Digital Twin + Agentic Control Engineers
- Vertical AI agents: legal, healthcare, manufacturing, mobility
- Hybrid CPS + AI agent systems in factories and logistics
- Safety, Alignment, and Governance Roles
- AI Verification & Validation Specialists

New Economic Model: Human-AI Teams

- Humans set goals, constraints, ethics, customer context
- Agents perform execution
- Humans provide judgment and escalation



Agentic AI: Challenges, Risks?

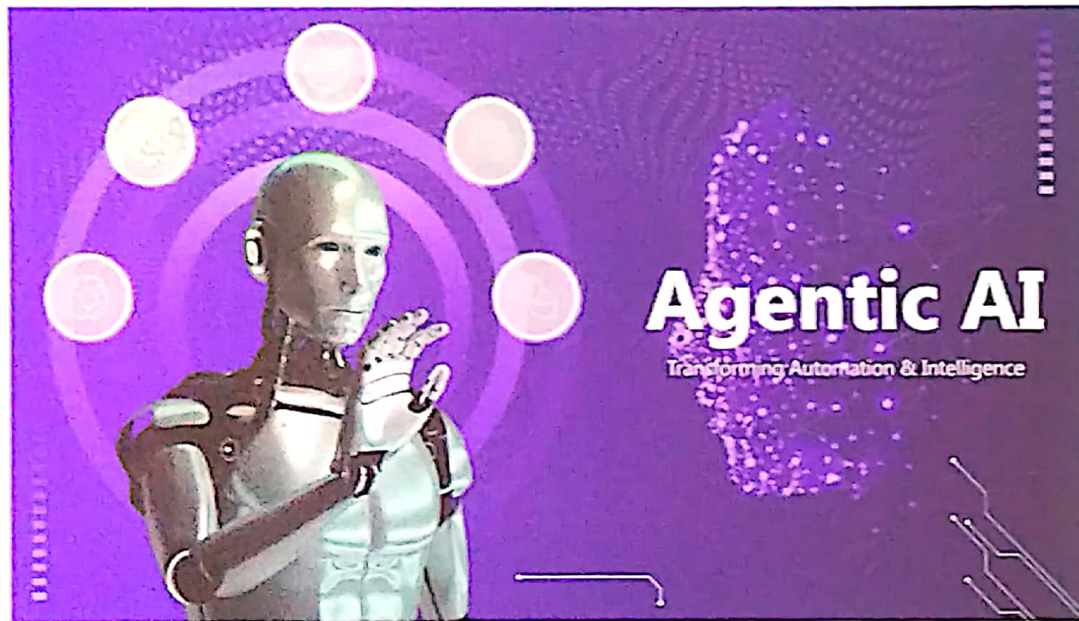
- Misalignment & runaway actions
- Tool misuse and harmful behavior
- Data leakage, privacy
- Hallucinations in long action-chains
- Auditing autonomous decisions
- Workforce transitions & capability gaps
- Governance frameworks not yet mature

Agentic AI Risks for Regulated Industries



 Multimodal

>> **Supervised autonomy** is the practical model for 2026–2027.



Thank You

(Ack: Book, Internet Resources)
[© TechCrafter International Pvt Ltd]

Dr. Aloknath De, Founder & CEO - TechCrafter.cps
(Follow us in LinkedIn)