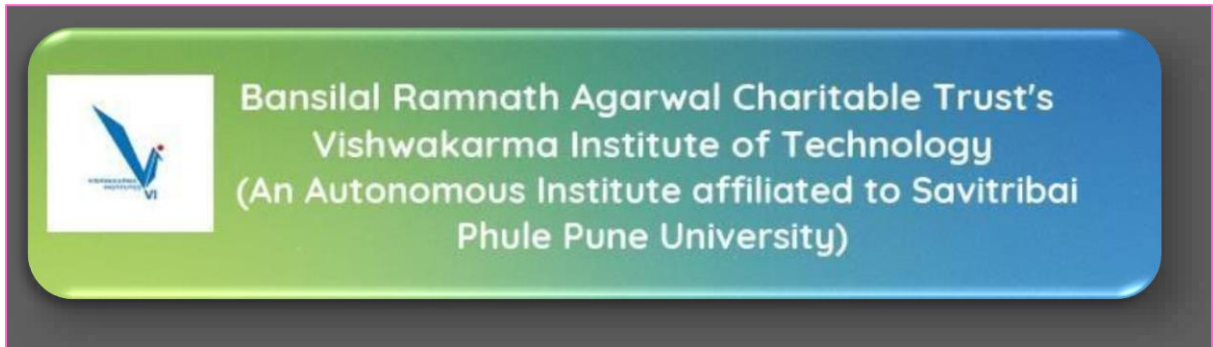




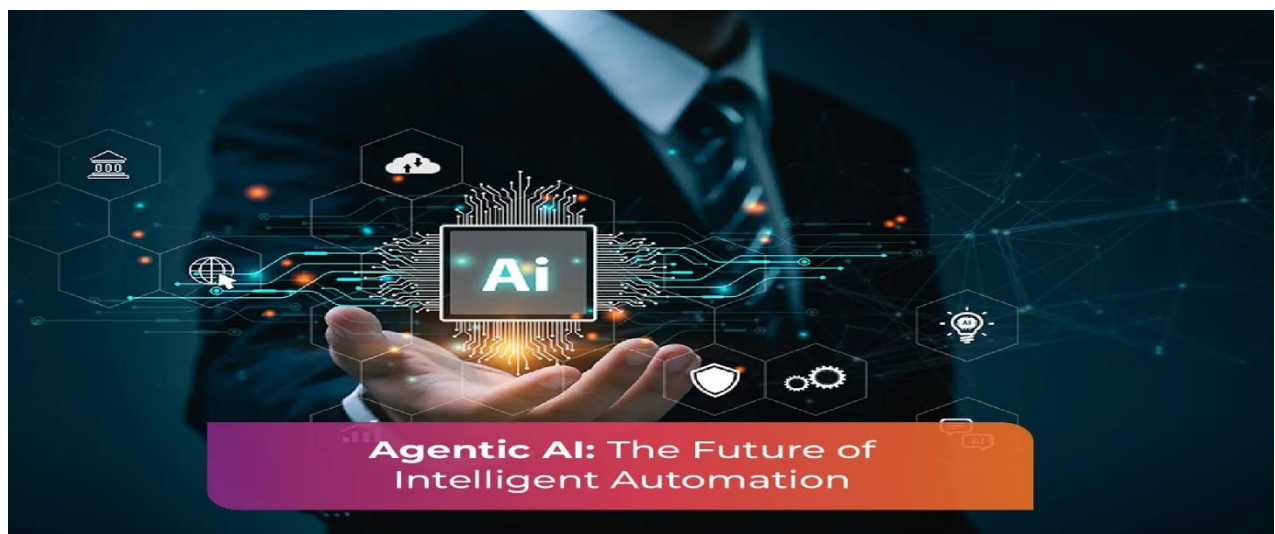
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (ARTIFICIAL INTELLIGENCE & MACHINE LEARNING)

CSE(AI&ML)- SPECTRUM

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AGENTIC ARTIFICIAL INTELLIGENCE

Welcome to the edition of the CSE(AI&ML)-Spectrum on AGENTIC AI ! In this monthly publication, we are excited to bring you the latest advancements in AI, including its innovative applications in enhancing data processing by creating something new, transforming how it generate and interact with digital content.



INTRODUCTION

- Agentic AI, or autonomous AI, is a type of artificial intelligence that runs independently to design, execute, and optimize workflows – allowing enterprises to more effectively make decisions and get work done. AI agents can make decisions, plan, and adapt to achieve predefined goals - with little human intervention or completely autonomously.
- Operates autonomously, making decisions and pursuing goals, asking for human guidance when needed
- Analyzes situations and finds the best path for moving forward
- Designs, executes, and optimizes workflows to achieve specific objectives
- Adapts to changes and continuously self-improves.



- After defining objectives Agentic AI takes action-if a workflow exists to satisfy the intent ,the agent can execute it .Sometimes ,agents may design their own workflows on the fly-but always checking in with humans for support. If situations change along the way AI agents can adapt their strategy for optimal results .Agentic AI always looking ahead-anticipating needs predicting responding to opportunities.

Case Study

Financial Services

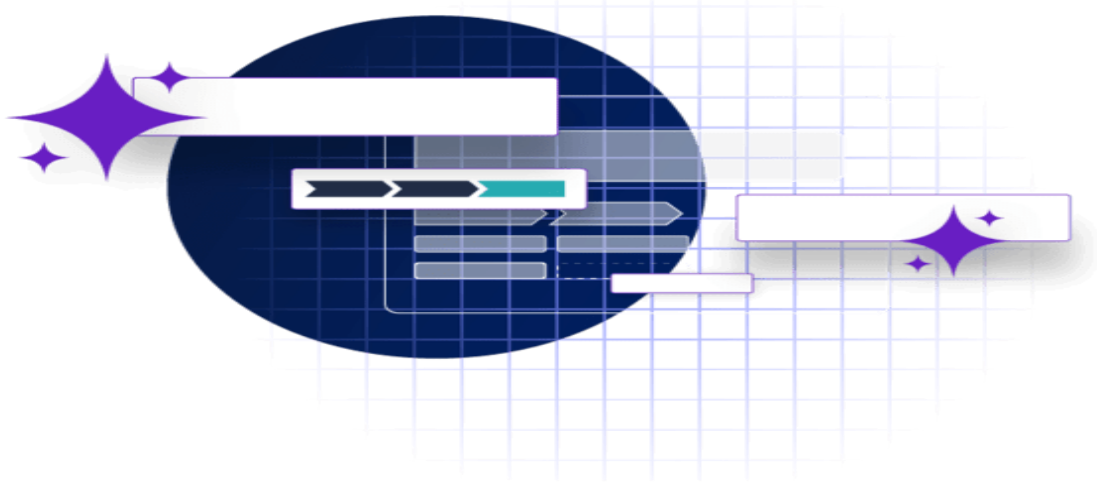
Capable of analyzing vast amounts of data, AI agents excel at fraud detection. Once detected, agentic AI can launch an automated workflow that carries out the steps for resolving the fraud issue.

Healthcare

Agentic AI holds substantial value in healthcare settings, where it can analyze patient health data for proactive care, schedule appointments, and guide patients and providers through healthcare journeys.

Agentic AI workflows transform business operations by enabling systems to act autonomously, make real-time decisions, and adapt to changing environments. They streamline processes, reduce manual effort, and enhance efficiency in industries like customer service, supply chain management, and healthcare, leading to smarter automation, personalized experiences, and faster outcomes.

Pega Blueprint serves as a foundation for designing, deploying, and refining agentic AI workflows, ensuring these workflows are both effective and aligned with strategic objectives.



RISKS ASSOCIATED WITH AGENTIC AI

Based on large action models (LAMs), agentic AI's complexity presents some risks to enterprises. AI agents, who are capable of acting autonomously, confront businesses with additional risk.

- **Inaccuracy and ethical failures**
AI agents may act erroneously or unethically and can carry out unintended actions that harm your business.
- **Opacity and loss of control**
The complexity of agentic AI can make it difficult to understand and manage – and its autonomy can make it difficult to control.
- **Security and compliance**
AI systems can suffer from security threats and data breaches. AI agents may produce outcomes that violate regulatory compliance or create liability issues.

How to mitigate the risks

- **Ensure transparency and human oversight**
AI's reasoning and decisioning processes must be transparent. Conduct regular audits and exercise human oversight in critical decisions to reduce potential risk.
- **Bake in Orchestration**
Ensure that agents follow existing best practices and rules by including Business Orchestration and Automation Technology (BOAT) in your architecture.
- **Develop strong guardrails and security protocols**
Create guardrails to keep AI agents in line with your business needs. Adopt or develop security technologies that control risks.



BENEFITS OF AGENTIC AI

- **Increased efficiency**
By automating workflows and making real-time decisions, AI agents enable straight-through processing – transforming your enterprise into an operations powerhouse.
- **Enhanced self-service**
When engaging with a chatbot, agentic AI understands the customer's intent and guides them to resolve their own service cases or workflows without escalating to a live agent.
- **Maximized employee performance**
By understanding complex situations, AI agents can guide employees with next steps for advancing their work assignments – based on your company's policies and best practices.
- **Better and faster workflow design**
Agentic AI – like Pega Blueprint™ – can suggest workflow designs based on industry best practices, both accelerating speed to market and acting as a creative partner to developers.
- **Hyper-personalize engagement**
By analyzing vast amounts of data, AI agents can understand the needs of customers and determine the best course of action in real time, for highly personalized experiences.

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