



# Building Multi-Agents Systems in Java World

Java Americas Community  
Community Palooza  
Generate+

November 2024



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# Agenda

1. GenAI
2. GenAI Agent
3. Java technologies for GenAI
4. Spring Statemachine
5. Demo

# GenAI

Machine learning models capable of generating new data or content that mimics real-world data.

## Generation of

- Text
- Image
- Audio
- Video
- Code

(e.g., ChatGPT, DALL-E, music composition)



## Real-world use cases

- Chatbots
- Personalized learning experiences
- Content generation for marketing
- Personal finance advisor
- Design solutions
- ...

# GenAI Agent

- Interacts with its environment
- Collect data
- Perform self-determined tasks to meet predetermined goals

## Benefit

- Improved productivity
- Reduced costs
- Informed decision-making
- Improved customer experience

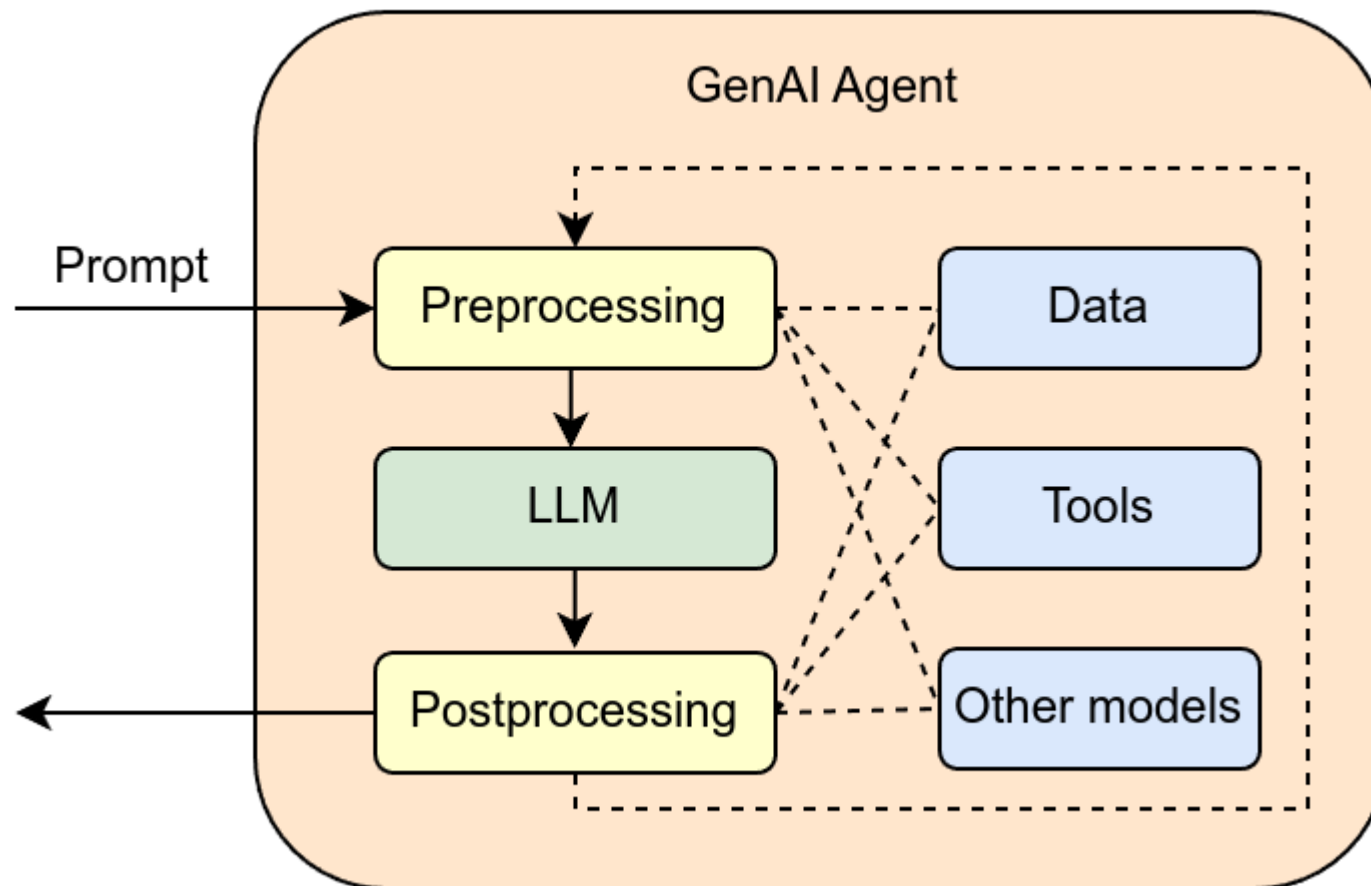


Image taken from [https://en.wikipedia.org/wiki/Generative\\_artificial\\_intelligence](https://en.wikipedia.org/wiki/Generative_artificial_intelligence)

# Java technologies for GenAI



 **spring<sup>®</sup>AI**

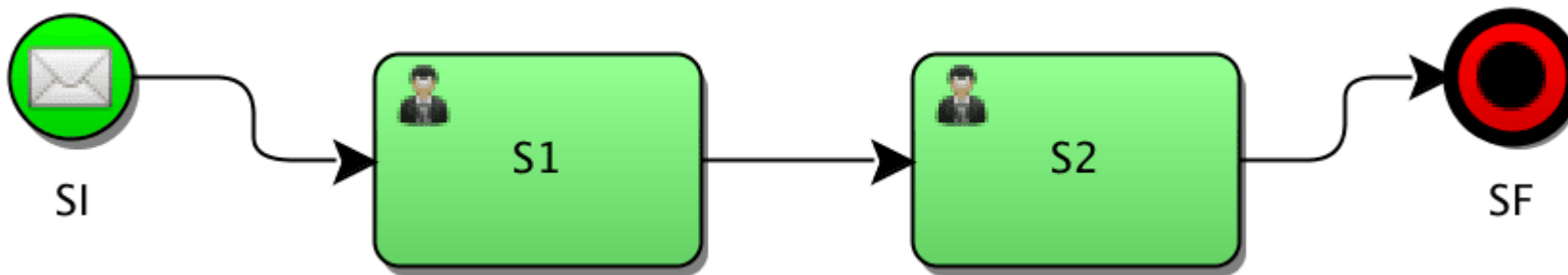


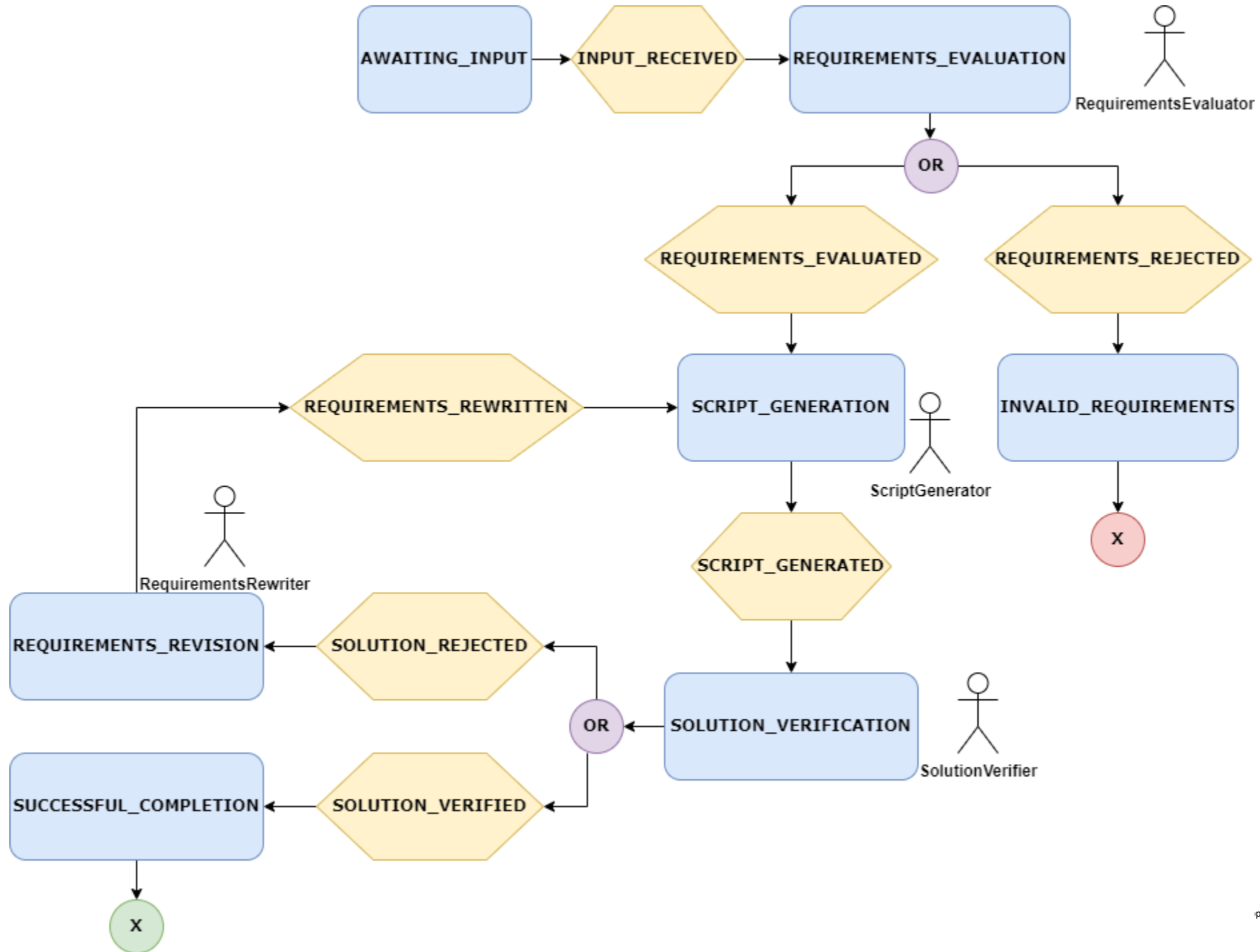
**Semantic Kernel**

# Spring Statemachine

Define finite:

- State machines
- Transitions
- Action







<epam>

# Demo

Coding Time!

<https://github.com/ewcastroh/agents-demo-langchain4j>



# References

- <https://aws.amazon.com/what-is/ai-agents/>
- <https://docs.langchain4j.dev/>
- <https://spring.io/projects/spring-ai>
- <https://learn.microsoft.com/en-us/semantic-kernel/overview/>
- <https://spring.io/projects/spring-statemachine>
- <https://github.com/ollama/ollama>



Thank you!