Bringing memory capabilities to Alexa with the My Jarvis skill

Ricardo Ferreira
Lead Developer Advocate, DevRel

Human-like experiences require memory

Top three reasons why bringing memory to Alexa is a good idea

Personalized experience
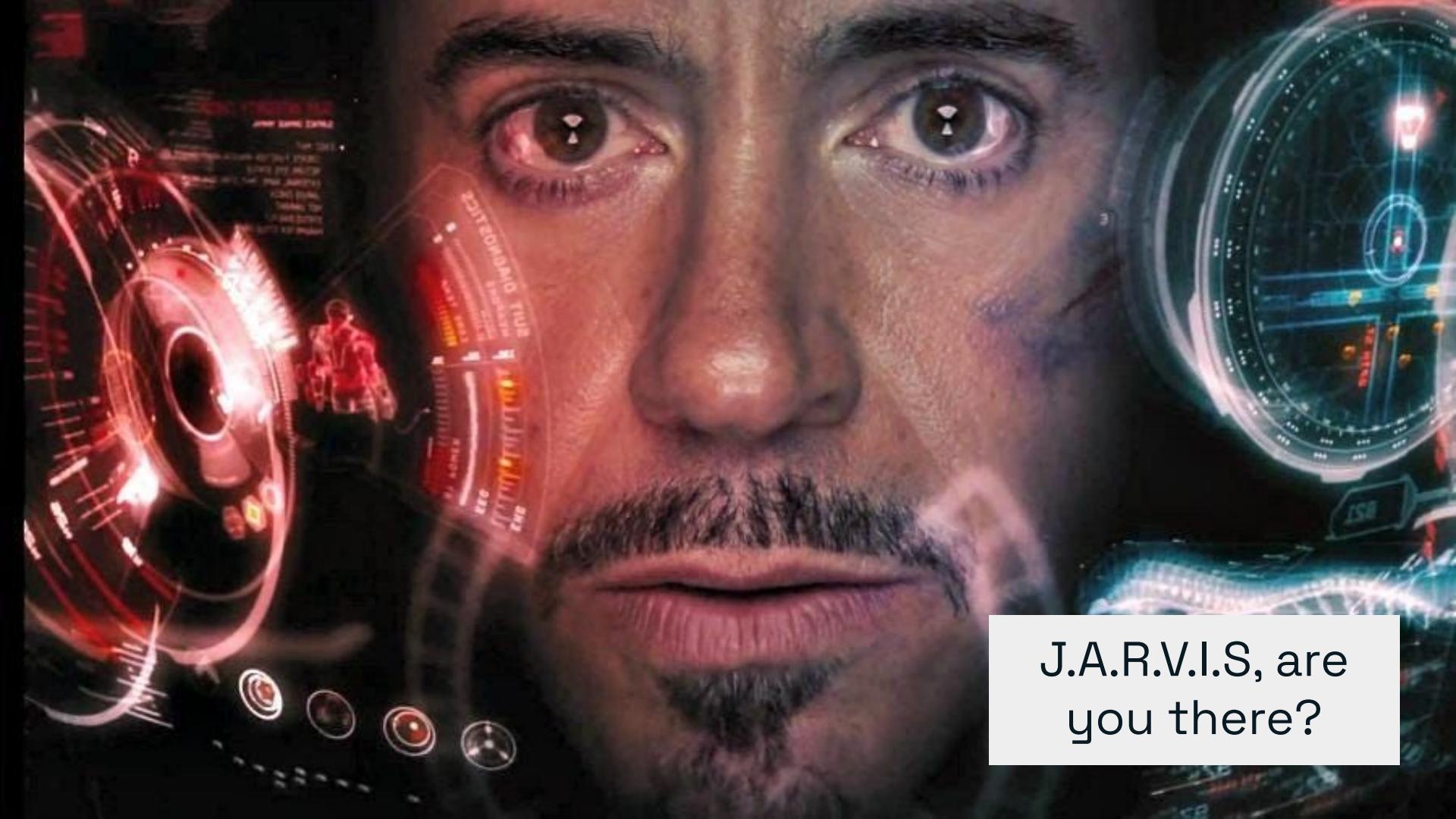
→ Learns the user's routine and make better recommendations

→ It knows you, your family, and each one's weekly agenda

→ Suggests products, music, and content based on past data

Continuous conversations

→ "Alexa, add to the list what we discussed yesterday morning"

→ Never have to explain the same medical condition all over again

→ Talk like you would with a human that knows your past
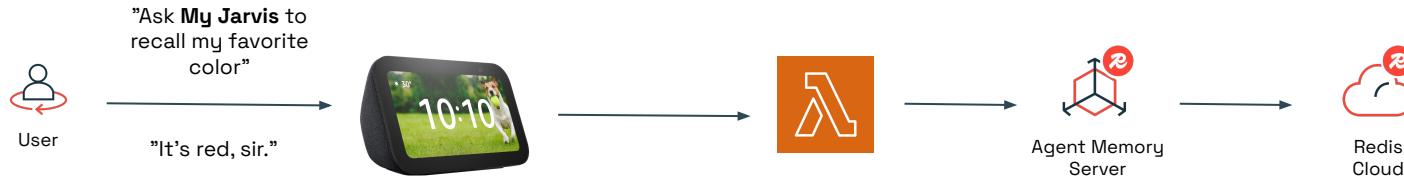
Productivity multiplier

→ With a living knowledge base acting like a encyclopedia

→ Reminds you about one-off and recurring appointments that came out of recorded memories

→ Monitor your progress on tasks like fitness or financial goals
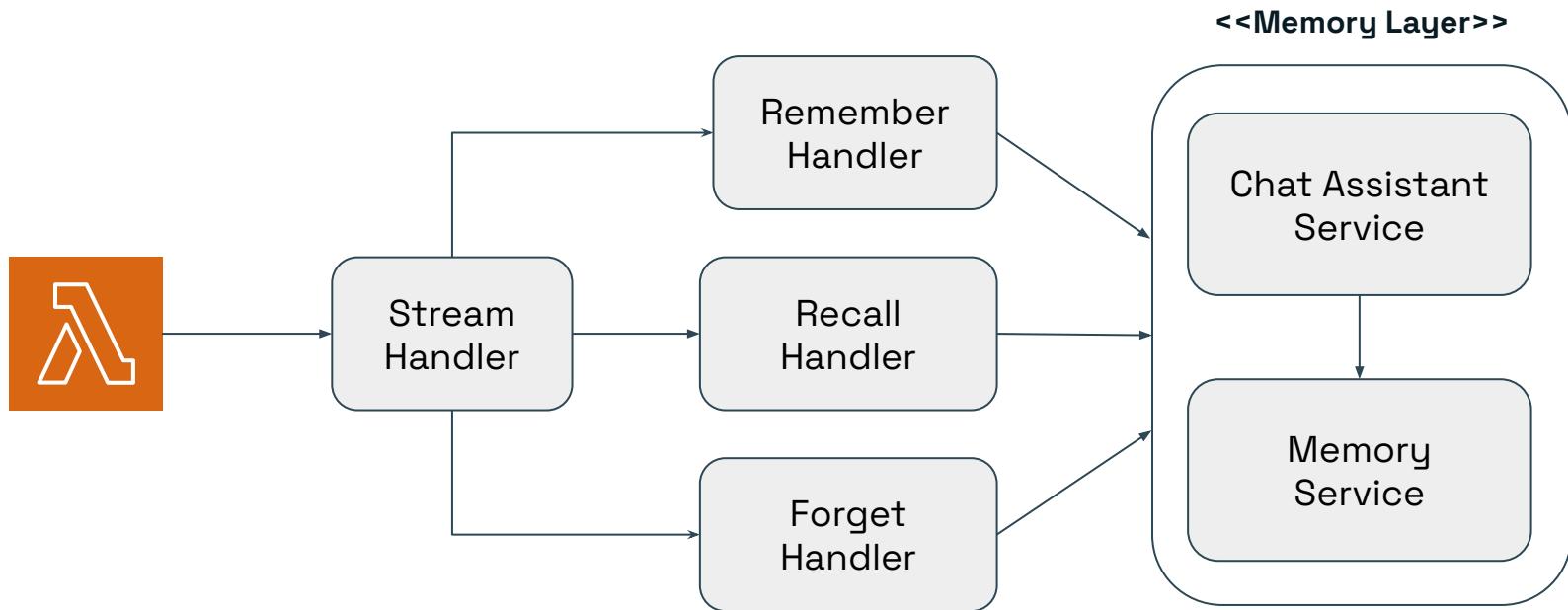
J.A.R.V.I.S, are you there?

User flow interaction

"Ask **My Jarvis** to remember my favorite color is red"

"Very well, it's done!"

User

"Ask **My Jarvis** to recall my favorite color"

"It's red, sir."

User

Agent Memory Server

Redis Cloud

Agent Memory Server

Redis Cloud
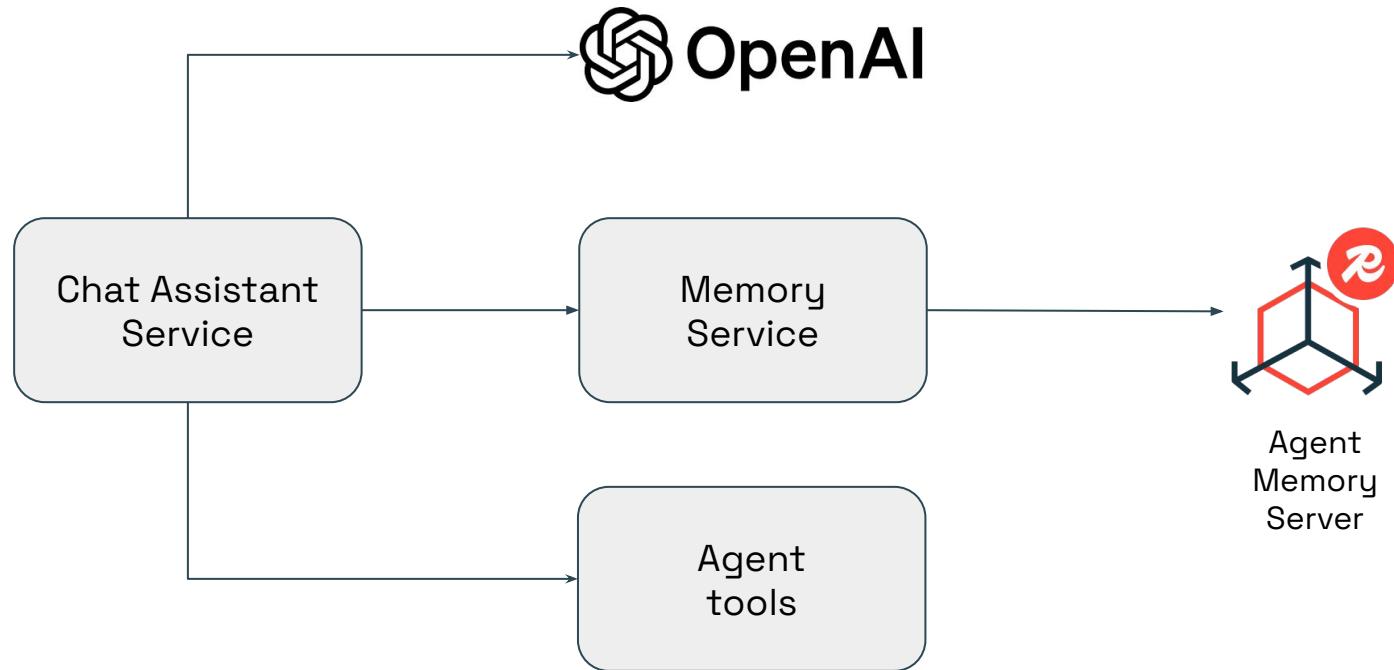
Lambda handler implementation

Memory layer implementation

Technology stack

Cloud services, frameworks, and programming languages used

→ AWS services
  – AWS Lambda, Amazon EC2, Amazon Event Bridge, Amazon CloudWatch
→ Infrastructure
  – ASK CLI, Bash, Terraform
→ Languages and frameworks
  – Java 21, AWS SDK for Java, ASK SDK for Java, LangChain4J
→ Databases and storage
  – Redis Agent Memory Server 0.12.1, Redis Cloud database

Thank you.