



AZURE DAY



Chat with your private data using Azure and Kernel Memory

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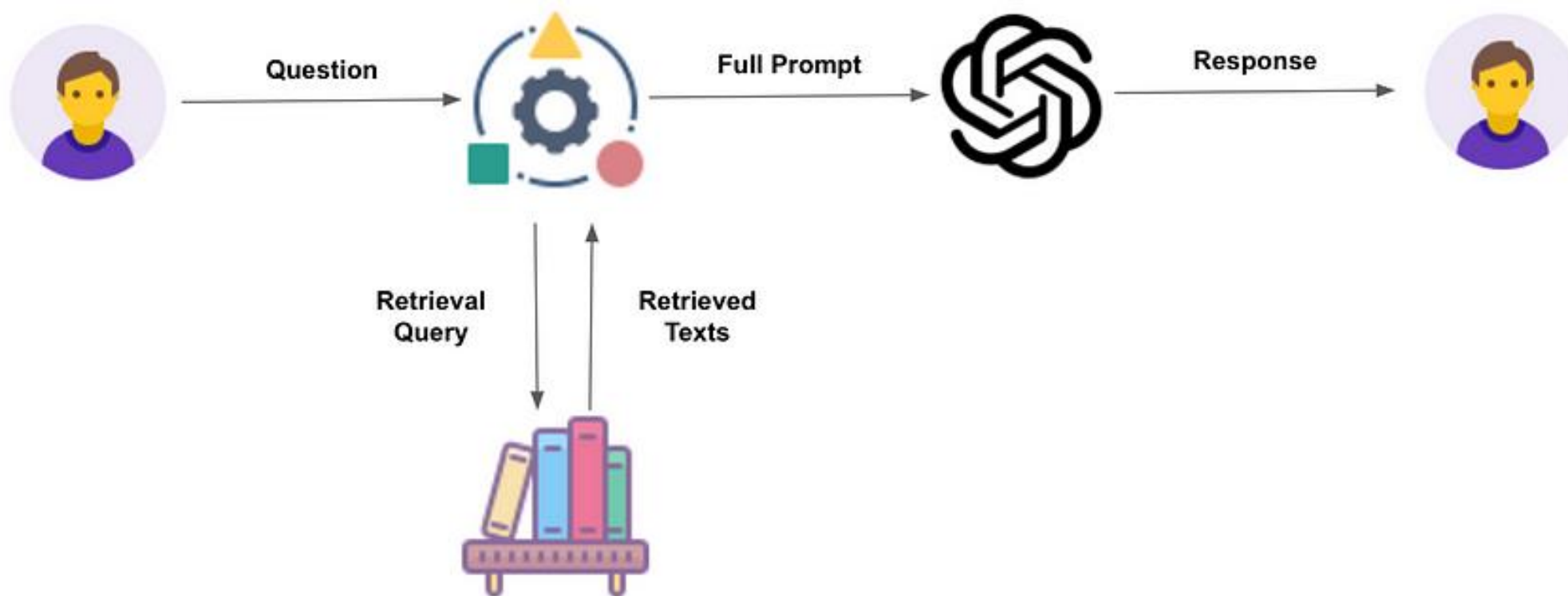
Thanks to





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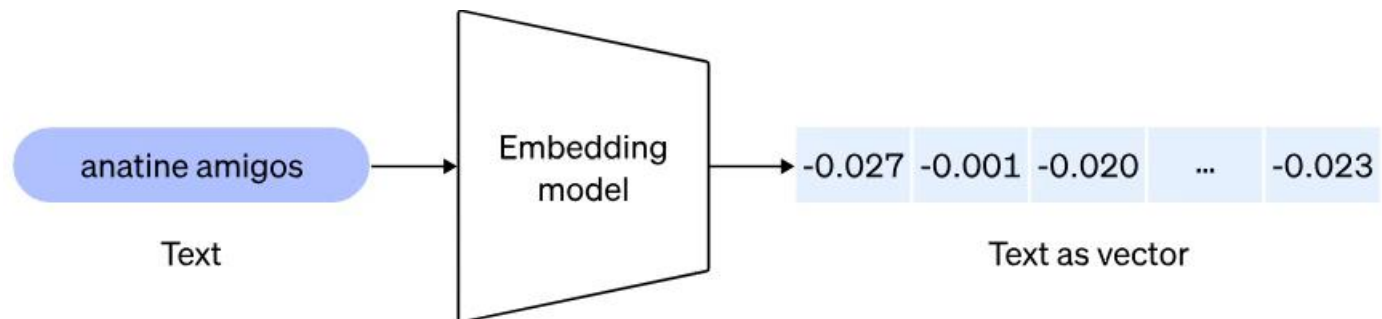
Retrieval Augmented Generation





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It all started with the Embedding

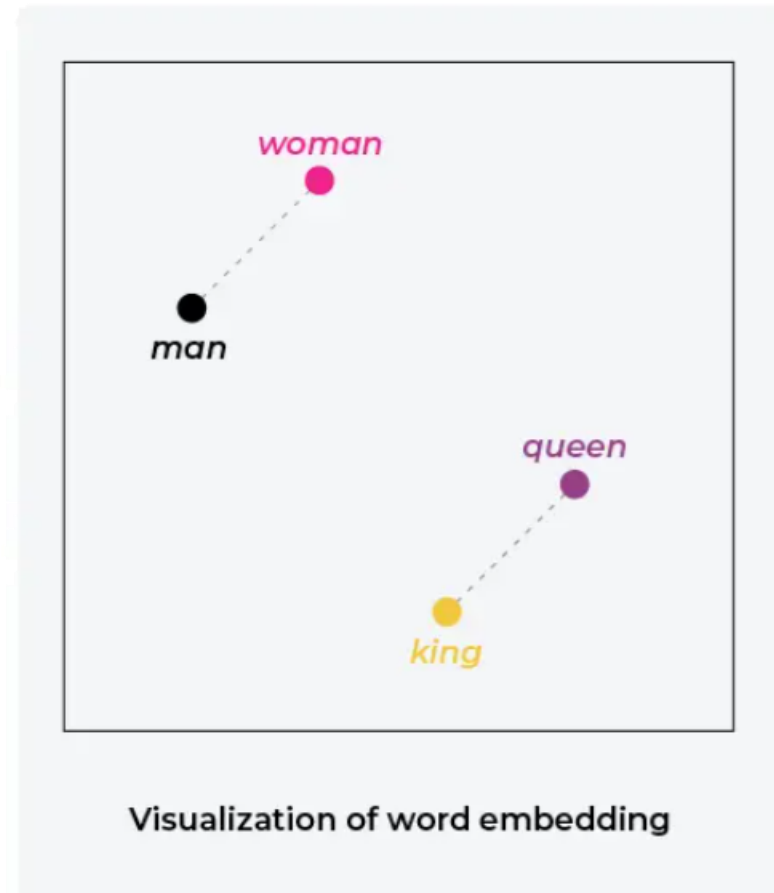




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How Embedding works

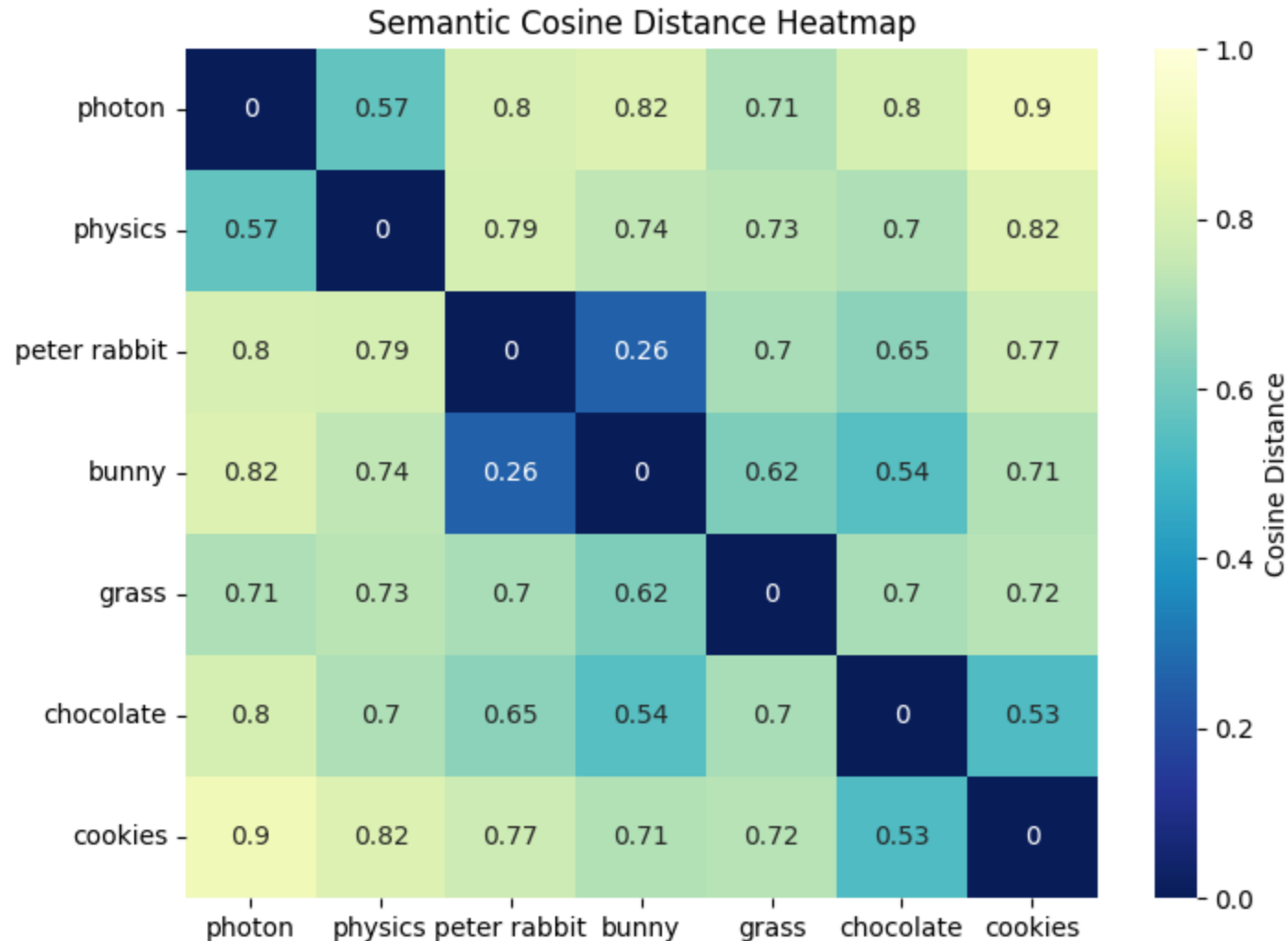
		living being	feline	human	gender	royalty	verb	plural
man	→	0.6	-0.2	0.8	0.9	-0.1	-0.9	-0.7
woman	→	0.7	0.3	0.8	-0.7	0.1	-0.5	-0.4
king	→	0.5	-0.4	0.7	0.8	0.9	-0.7	-0.6
queen	→	0.8	-0.1	0.8	-0.9	0.8	-0.5	-0.9
word		Word embedding						





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Cosine Distance

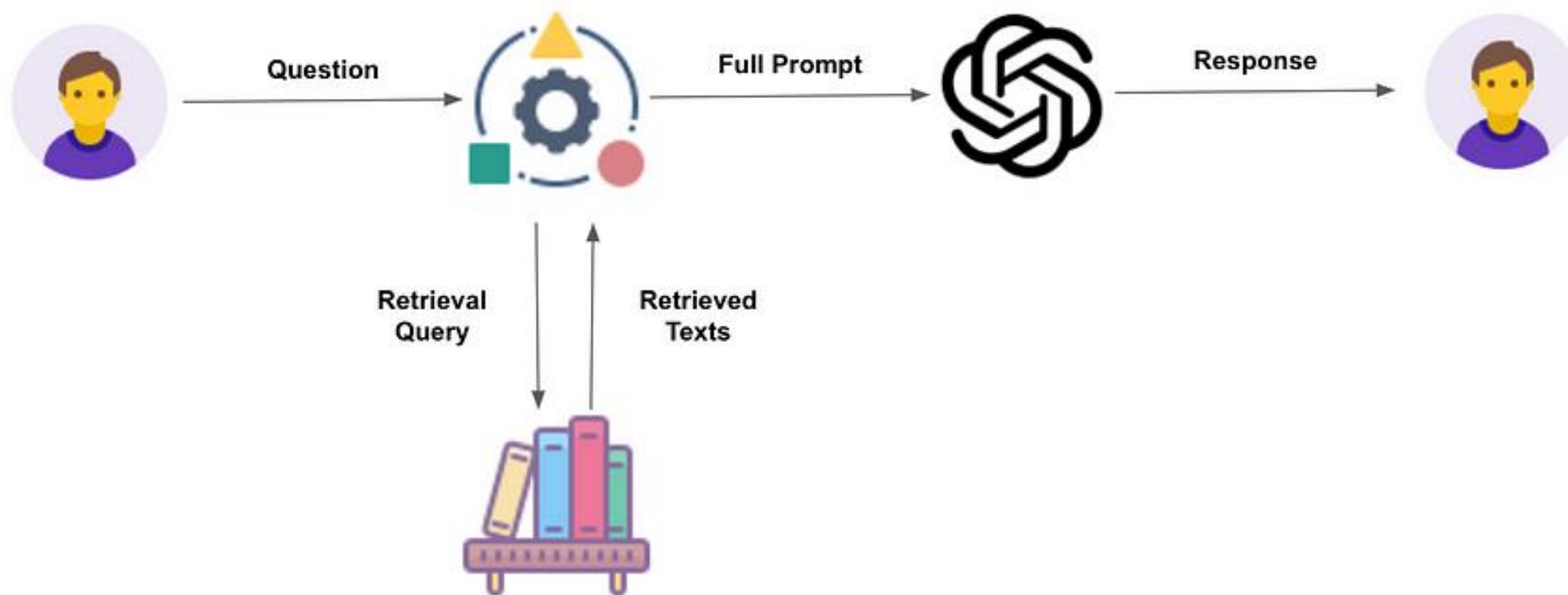


$$\text{cosine_distance}(A, B) = 1 - \text{cosine_similarity}(A, B)$$



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Retrieval Augmented Generation





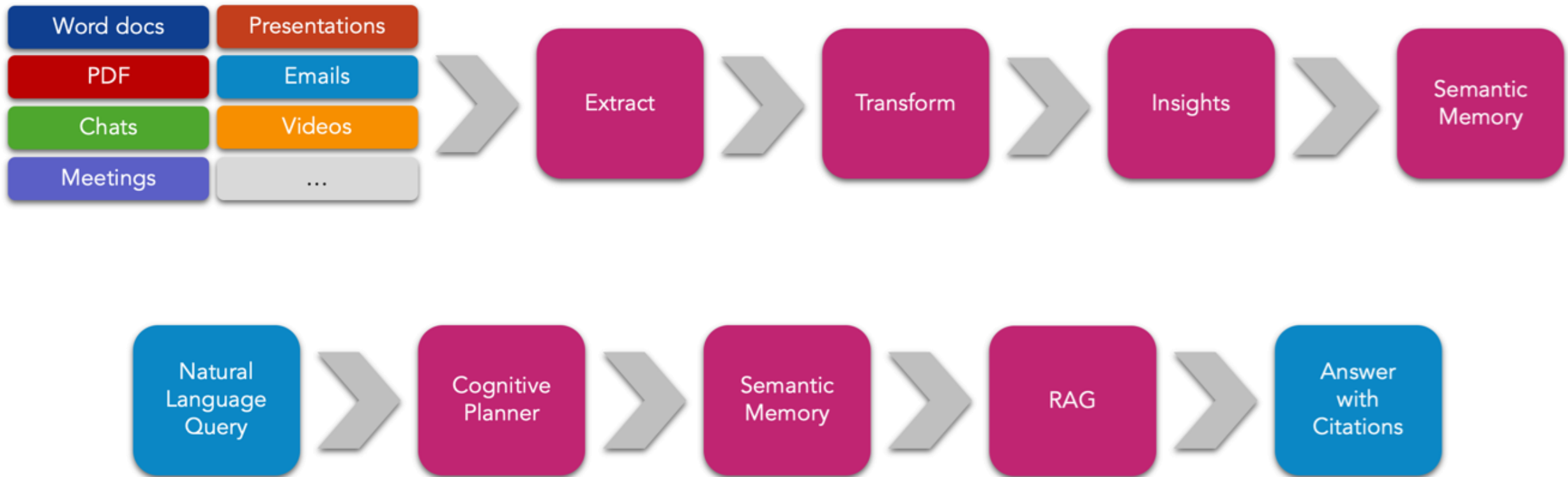
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Kernel Memory

Contributors 39



+ 25 contributors

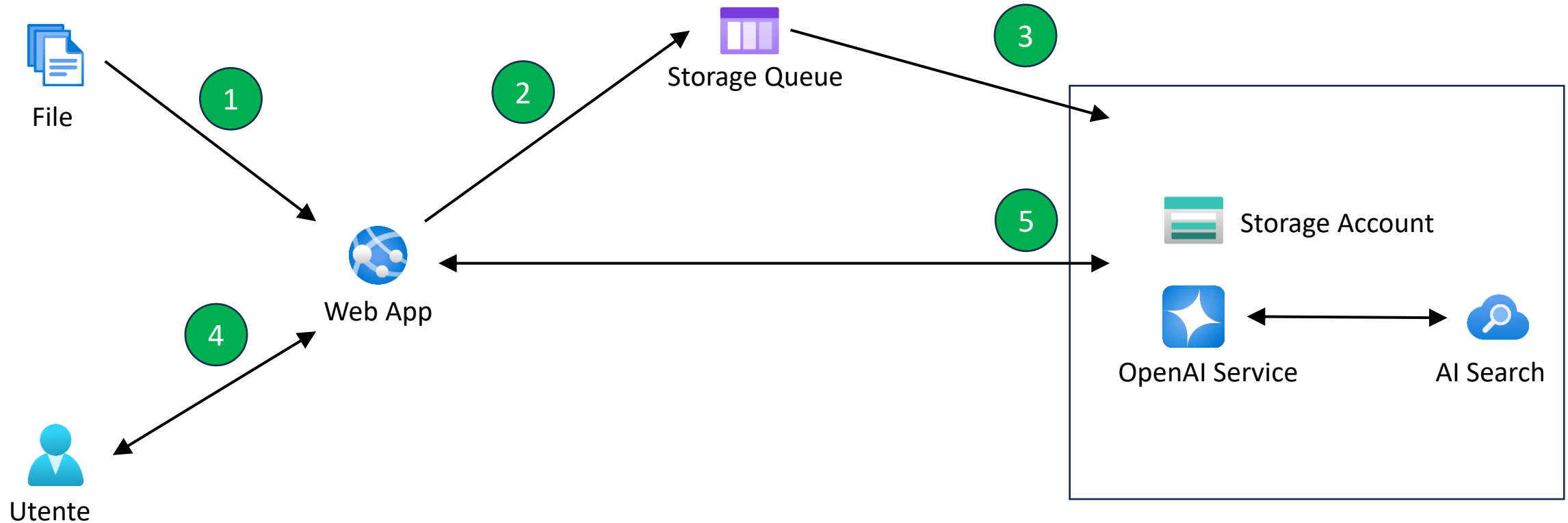




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System Architecture

Ingestion `await kernelMemory.ImportDocumentAsync("Taggia.pdf");`

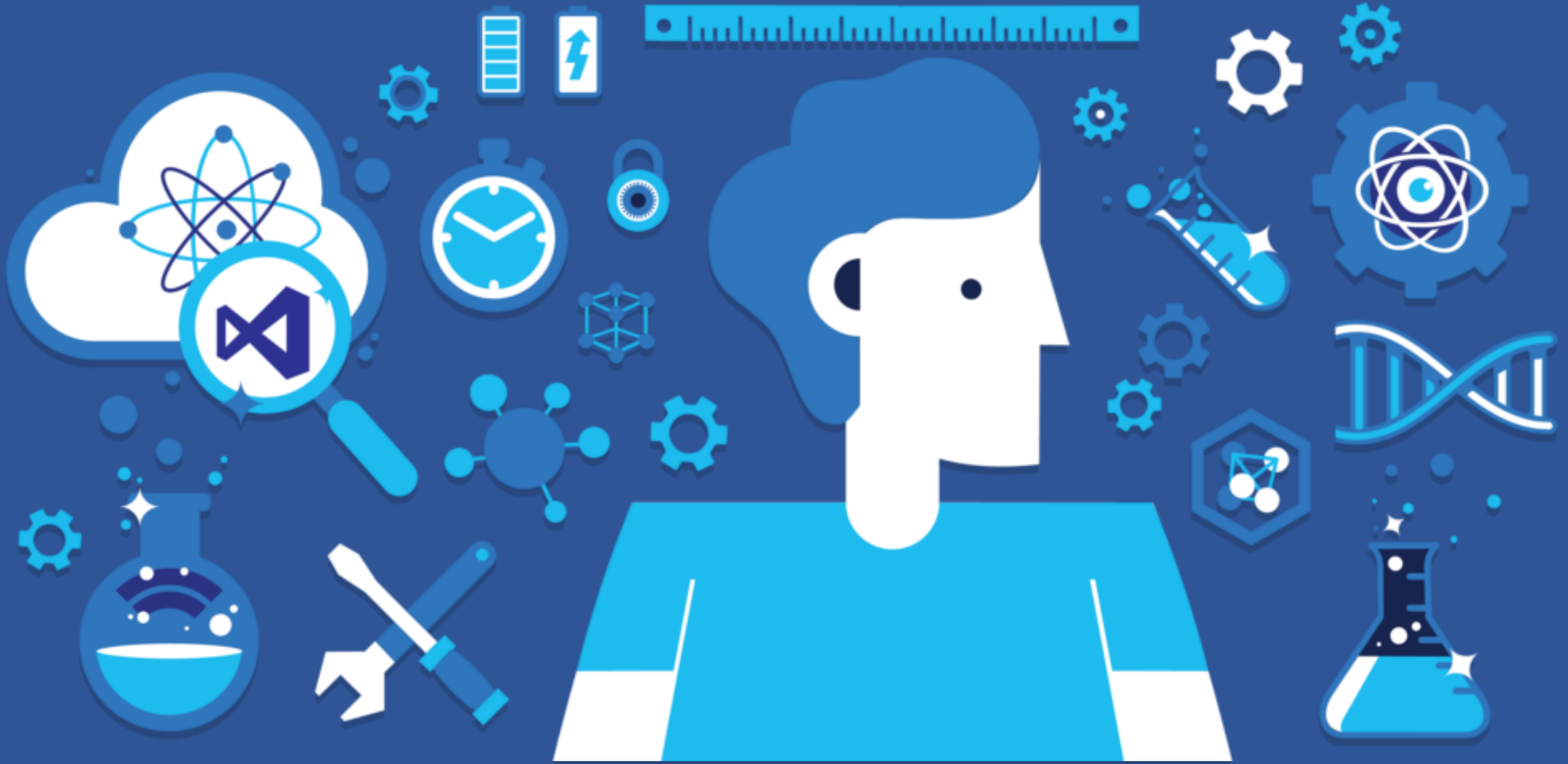


Query and retrieval `var answer = await kernelMemory.AskAsync(question);`



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Demo





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References

- <https://github.com/marcominerva/KernelMemoryService>
- <https://github.com/microsoft/kernel-memory>
- <https://learn.microsoft.com/en-us/semantic-kernel/memories>
- <https://discord.gg/semantic-kernel-1063152441819942922>



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Thanks! Questions?



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