QUARTER - 2 - LECTURE - 2 (04-December-2024)

* In November 2022, Artificial Intelligence achieves human level AGI (Artificial General Intelligence).
* AGI means every work which human can do, machine can also do.
* AGI divided into 5 levels where “Agentic AI” is at level 3.
* Agentic means virtual human (analyze then act).
* Agentic AI is autonomous (independent) which can understand, decide and act.
* Academia (research papers report) shows many researchers are working on Agentic AI.
* Job posting: from April 2024, there are many jobs of Agentic AI.
* OS Repositories: from March 2023, high trending of Agentic AI.
* Google searching: after 2023, searching of Agentic AI increased.
* In Predictive AI, we trained model of AI by taking lot of data and then give data to AI model and after training, model will be able to predict output based on its training data.
* In November 2022, Generative AI introduced in the form of Chat GPT and provide content based on required data.
* Generative AI is transformer based algorithm.
* Generative AI is dependent on prompt.
* Now, Agentic AI comes which perform actions independently.
* Agentic AI take decisions and keep us updated related to decisions.
* Generative AI fall on level 1 and level 2 while Agentic AI fall on level 3.
* At backend, Agentic AI use LLM.
* We move from Generative AI to Agentic AI through using “Tool Calling”.
* Tool Calling is using external resources which are already present.

Example: Third Party API (Application Programming Interface)

* AGI (Artificial General Intelligence) can achieve by below mentioned levels:

1. Chatbot (AI with conversational language) : machine can talk like human
2. Reasoner (human level problem solving) : analyze, verify and then respond and only Open AI achieve this level and called as “O1”
3. Agent (take action independently)
4. Innovator (for future)
5. Organization (for future) : ASI (Artificial Super Intelligence) or Singularity (machine overtake human), level when machine is more skilled/reliable than human

* Repository : <https://github.com/panaversity/learn-agentic-ai>

Quarter-2 will cover from “-01\_rise\_of\_agentic\_ai” to “11\_sandboxes”

* Overview:

1. 01\_rise\_of\_agentic\_ai: presentation and video related to “Rise of Agentic AI” is present
2. 00\_helloworld\_ai\_api: We will work on hello world application with respect to API (Application Programming Interface) of AI
3. 01\_technology\_background : learn GPU, Transformer and how API of AI created and on which technology
4. 02\_generative\_ai\_for\_beginners : learn basic concept of generative AI
5. 03\_custom\_gpts: learn how to create custom GPT and in depth concept of prompt engineering
6. 04\_ai\_agents\_intro : introduction related to agent
7. 05\_crew\_ai: we will create agent by crew AI, main topic, we do coding in python
8. 06\_prompt\_engineering: for custom GPT and Crew AI, we learn prompt engineering in detail
9. 07\_graph\_query\_language: learn GQL (Graph Query Language) with Graph database
10. 08\_agent\_payment\_system: we will create an agent with payment system project
11. 09\_memory: we ask question from agent then agent use brain of LLM to get answer, therefore, we will learn about memory of agent
12. 10\_tool\_libraries: learn about tools and libraries which we can use for tool calling
13. 11\_sandboxes: coding environment where agent do coding

* Crew AI is a framework by which can easily create agents.
* Crew AI will give steps of flow of system (example: payment system) for agent.
* We will use Google Copilot.
* Our course name is AI-201. Next course is AI-202.
* Syllabus is shared at location : https://docs.google.com/document/d/15usu1hkrrRLRjcq\_3nCTT-0ljEcgiC44iSdvdqrCprk/edit?tab=t.0