Artificial general intelligence system structure notes

initiated in the lecture: Why Artificial General Intelligence (AGI) is a hindrance for responsible AI that truly benefits societies

By: Samer Attrah

Lecture by:
Professor Joel Fischer

Introduction:

      Artificial general intelligence is the state of building a system that is able to function fully like a human and do everything a human is capable of.

Lecture notes:
It was a pleasure to attend the lecture of Professor Joel Fischer yesterday (24-July-2024) at <u>Eindhoven University of Technology</u> by <u>EAISI – Eindhoven Artificial Intelligence Systems Institute</u>.

I made some notes, about the lecture in which the Professor emphasized the importance of building scoped AI systems that are meant for specific applications, instead of building AGI systems which are un-scoped. and that is because AGI systems are difficult to test, keep track of or maybe even difficult for humans to get help from them.
one idea that occurred to me from a slide was shown during the lecture that compares the human intelligence to AI capabilities.

The idea was changing the approach to building the AI system from "training" which is limited to a certain task and skill set when compared to the process done by humans, to "raising" which includes building the system from the very start point similar to birth in humans in a shape looks and functions like a human body, and taking that body through experiences, tests and exams or some other learning criteria for example reward and punishment, and keeping the training for the well-scope-defined systems and building the AGI systems by raising them.

to further elaborate on the idea, I could say raising could be achieved by building a system with all the sensory parts, such as camera, lidar, microphone, US sensors, speakers, and train machine learning models for each sensor to understand the signals coming from it, and translate them into useful information understandable like text.

these sensory parts get all integrated into another central AI system which is built to process the information, learn from it, and save the most general, abstract and useful lessons and skill sets in a database, in the form of text, and this database could get checked by humans against human values and principles for good and bad, right and wrong, lessons and skill sets, just like the human when learning, being taught or parented.

Or it might get built with some other approach or group of approaches more similar to the life of a human from the beginning to maturity when at the maturity point of the AI system it becomes helpful.

To elaborate further
after the AI system matures and have a high quality and human database of summarized experiences, it could join the human community or may be get hired by a company to fill some job vacancy.
And the process of working happens by retrieving the abstract information from the database and, apply it to the scenario the system is going through, and once again learn from the reactions and experiences.

This system could get mounted on a robot with shape similar to a human with four limbs and a head, and then it will learn think and function like a human living a full life instead of doing a single, simple and focused task.

Notes (28-July-2024)

since ideas for further improvements could come while working on building the project.
tried to implement the system, so started with analyzing camera stream, and getting text description for it.
But checked on Google Gemini and could not find this capability.
And checked on OpenAI and could no do much with free subscription of GPT-4o.

So will stop the trial to implement.