

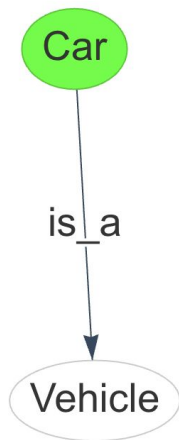
Knowledge Graph – One Step Closer to an Autonomous System

GPT + Software Programming

Knowledge Graph

A knowledge graph describes the factual relationships between entities.

For example, “Car is a vehicle” can be represented in knowledge graph like this:



Schema/Ontology is the formal definition on entity and every possible relation.

Ontology enables us to check the logical consistency using symbolic logic to.

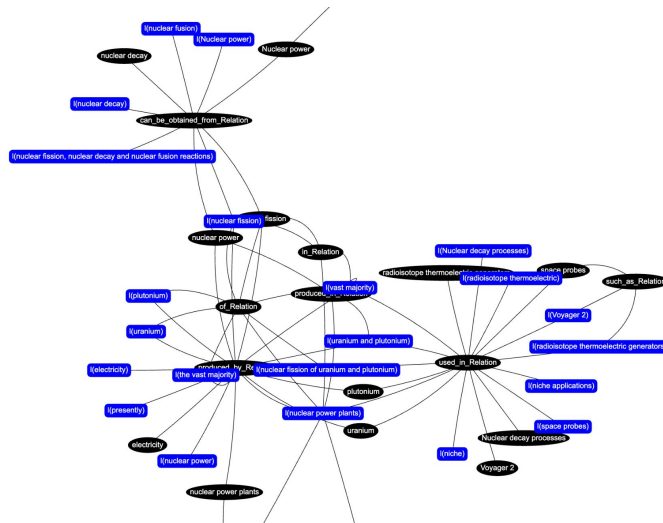
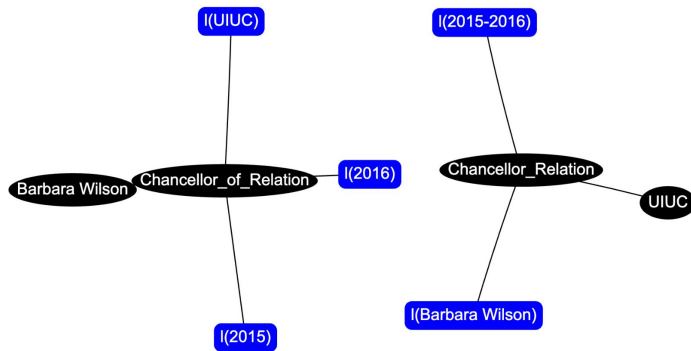
Knowledge Graph Construction

Three Steps:

Entity Recognition (*done*)

Relation Extraction (*done*)

Entity/Relation Aggregation



Autonomous AI System

Understand/Decompose:

Given a task, it breaks down the task and design a solution

Environment:

Memory. It has shared memory, but also specific memory for each agent.

Agents:

An agent is assigned a role. An agent does task fitting to the role.

Actions:

Skillset. Based on environment, agents choose which skill to perform;
which action to take

Short-term Plan (1 - 2 weeks)

- Recruit students. Hold an info session.
- Start Entity/Relation aggregation
- Finish a demo for Autonomous AI
- Design a system framework where LLM can use knowledge graph.

Long-term Plan

- 2023: Graduate. Apply for graduate school. Publish papers. Build a profitable startup.
- 2024: Startup, research. Graduate school.