IT2024 Project Progress Report

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Abstract

In this document, the schedule on the progress report presentation and comments on the reports are addressed. There are general comments and specific comments. General comments are applied to all presenters. Specific comments are added for the presenters to help the presenters to revise their survey accordingly so as to improve their future reports and presentations. In particular, the title of each survey report is suggested. Final project presentations are scheduled on Week 17 and Week 18. If a student absence from the presentations, either Week 17 or 18, without proper reason, the student will get zero score in his/her final project presentation.

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1 Introduction

Conducting a survey is always a part of our life-long learning. Through a survey, one is able to learn new ideas, concepts and knowledge. Sometimes, one could explore from the survey to creating new ideas, concepts and knowledge. After a survey has been conducted, a report is usually compiled. The report summarizes all those ideas, concepts and knowledge which have been found. For a product survey, the report summaries the experiences how the user uses the product. The experiences include both good and bad experiences; and the limitations of the using the product in solving certain problems.

1.1 Purposes of a Survey Report

As the works and experiences in a survey could be huge, compiling a survey report is clearly a tedious task. With good logical thinking and presentation skills, one is able to complete a survey report in a short time. However, it might take a much longer time to complete a survey report if a person is poor in logical thinking and presentation skills. Therefore, a survey project is in essence a vehicle for the students to examine and improve their logical thinking and presentation skills.

1.2 On Progress Report Presentations

By that, two reports have been assigned for the students to complete, including the progress report which is submitted on Week 9 and the final report which is submitted on Week 18. As the time spent on the progress report presentations are longer than expectation, the time spanned on the presentations are extended to two weeks, Week 9 and Week 10. On November 8, 2024, i.e. the Week 9, four presentations had been delivered. On November 9, 2024, the reminding three presentations are scheduled.

1.3 Organization of this Document

In the next section, the presentation schedule is listed. In Section 3, the general comments are added for the November 8, 2024 presentations. Specific comments on each presenter who have presented are summarized in Section 4. Conclusions are presented in Section 6.

2 Progress Report Presentation

As many presentations were over-run on November 8, 2024 evening, one-evening schedule is now changed to two-evening schedule.

Session 1 (Nov 8, 2024: 19:00 − 22:20)

1. Russell Tseng, In Search of US Customs Law on Technology Products by Large Language Models.

2. Simon Chen, Agentic AI and Supply Chain Optimization.

3. Edmond Tsai, *Runway* : Synthesizing videos by generative AI.

4. Nancy Wu, *DocPie* : A platform for legal contract review and generation.

Session 2 (Nov 15, 2024: 18:50 – 21:30)

1. Ting-Hsien Lin, *Yahoo Fantasy Basketball* : An online game platform with NBA players.

2. Ken Lin, *Midjourney* : A generative AI image generator.

Session 3 (Nov 22, 2024)

1. Kemmer Wu, *Speak* : An AI tool for English language learning.

The English titles are added for your reports. If you have any comment on them, please let me know.

3 JS General Comments

In this and the next sections, the comments on your presentations are addressed. This section summarizes the general comments. The next section lists specific comments for each presenter.

- The contents presented by Tseng, Chen, Tsai and Wu are very good, as their contents are based on their personal experiences and understanding in the use of those AI tools.

- Those experiences are essential and should be entitled as *case studies*.

- Some instances of your use of those AI tools with unsatisfied results should be included in the reports and the presentation slides.

- Those instances with satisfactory results should be included in the reports and the presentation slides.

- The works to be done in the next half of the semester should be highlighted.

- The format of a professional conference paper will be introduced in the coming lecture(s).

- The organization of the contents is not formal. Your written reports cannot considered as a report. Based upon the four presentations, a suggested outline is given below.

  - Title of the report.
  - Author name and affiliation.
  - Abstract : A concise summary of the contents presented in the report.
  - Introduction : State the AI system to be investigated and the reason(s) (resp. motivation(s)) why you are interested in this system. Finally, introduce what you are going to present in this report.
  - XYZ System : State the task(s) you want the XYZ system to complete and present results obtained.
  - Comments on the good and bad sides of XYZ system.
  - Additional comments and discussions.
  - Conclusion : A summary of what you have presented in this report.

  Students should refer to the starting of this document for the formats of the 'Title', 'Author name', 'Affiliation' and 'Abstract'.

- Completeness is what I score the most.

- *How do those tech firms make profit from these AI tools (resp. apps)?*

Further comments from JS will definitely be added in the coming lectures. If you would like to get more comments from me, please send me an email for making an appointment.

4   JS Specific Comments

In accordance with the presentations delivered on November 8, 2024 evening, specific comments for the already presented reports are highlighted in this section.

4.1   Rusell Tseng

- Report title should be revised. You could consider the title I put for your presentation '*In Search of USA Customs Law on Imported Technology Products by Large Language Models*'.

- If you would like to add your experiences on the use of those AI tools for picture or video generation, you could put the report title simply as 'Use of AI Tools for Customs Law Survey and Image Generations'.

- The heading of Section 1 could be shorten as 'Use of Gemini for My Work'.

- The heading of Section 2 could be changed to 'USA Customs Law on Imported Technology Products'.

- A follow-up work is to get the information without any error. Likely, you will need to access the homeages from USA Customs.

- Please note the time (in term of days or weeks) spent on this task.

- Highlight the benefits of using the large language models for your search. If you have conducted the search without using any LLM and eventually got the information, its time spent as compared with the time spent with large language models can be found and stated in the report.

4.2   Simon Chen

- I have to say that, your summarization on the differences between *AI Agent* and *Gen AI* is a good work. Although, I have some comments on it.

- As mentioned in the lecture, your original report title is too long and confusing. After your presentation, I would suggested that the title should be changed to 'Agent-Based Workflow Design & Supply Chain Optimization : A Case of n8n System'.

- It should be noted that the use of the term *agent* can date back to a book entitled *Society of Mind* authored by Marvin Minsky in 1986. Moreover, agent is usually associated with the terms *mobile agent*, *intelligent agent* and *multi-agent* throughout the late 1990s to today.

- Clarification of the key concepts behind these terms is definitely helpful if you have enough time to do so.

- The work you are going to proceed should be belongs to a research area called *agent-based modeling.*
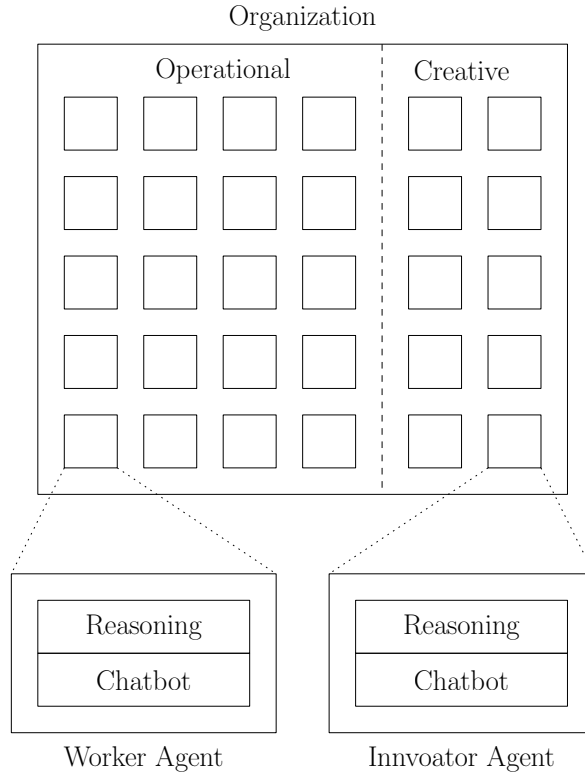
Figure 1: Five-Stage framework from OpenAI. Each worker agent is able to plan a workflow for completion of a job. Each innovator agent is able to generate hypothesis and plan for a workflow to validate the correctness of the hypothesis. Organizational level agents are able to generate goals and plans for an organization. Besides, they are able to orchestrate (select and coordinate) both the worker agents and the innovator agents to complete the tasks in accordance with the goals. It should be noted that the names of the products to be delivered under this five-stage framework should better be called 'chatbot agent', 'chatbot agent with reasoning and planning', 'working agent', 'innovator agent' and 'organizational agent'. All of them are agents.
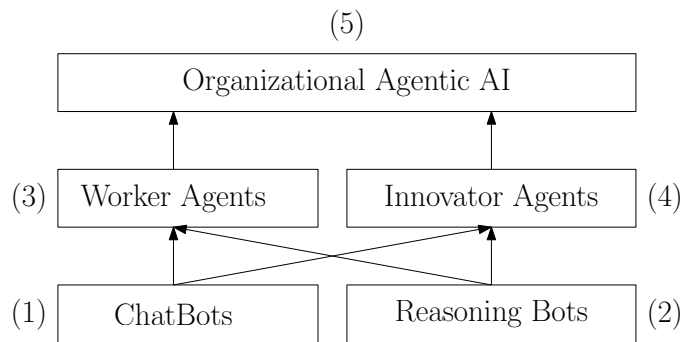
Figure 2: OpenAI five-phase development plan. The order of the phases is shown by the numbers with parentheses. In each phase, multiple bots/agents are developed. Each agent could be integrating (resp. accessing) multiple chatbots and reasoning bots for solving problems specified by the agent-level users. By the same token, an organizational agent could be integrating (resp. accessing) multiple worker agents and innovator agents for solving even complex problems by the organization-level users.

- The sources on those diagrams appeared in your report have to be cited.

- The 5-Level diagram for the artificial general intelligence (AGI) should be removed. Instead, the diagram I put on the white board should be added, as shown in Figure 1. It is better named this as a five-stage (or five-phase) framework for business/industry AI development. It is somehow related to artificial general intelligence (AGI). But, it is better not to relate this framework to AGI. The planning task is basically a workflow design task.

- Try to use the n8n system to do what you want to do and what you want to tell us.

- Basically, conducting a survey on just *Agentic AI* is already rich enough. The work could kill you.

4.3 Edmond Tsai

- Your explanation on your motivation on investigating AI video generators is a good job.

- You have from time to time highlighted the restrictions on the use of the Runway for video generation. This part is also good.

- As there are restrictions for free-to-use of Runway, it is suggested that you could add YouTubers' videos which share on the use of Runway in your presentation. If you would like to introduce other video generators, you could do the same thing. The contents regarding these YouTube videos do not have to be added in your written report. In the report, you can simply add a sentence like the following.

  There are many similar AI video generators. To have ideas how to use them, readers could access the following URLs [x][y][z][a].

  Each [x] corresponds to an URL cited.

- Many contents presented are valuable. But, they have not been added in your report. For instance, in the last part of your presentation, you have commented on different short video generators. This part is valuable and worth to be added as part of your written report.

4.4 Nancy Wu

- Your use of the phrase *academic sisters & brothers* is confusing. Precisely, you should say *academic sisters & brothers in my former university.*

- Regarding your comments on the limitations of the DocPie, you better add a real example showing your text inputs and its text outputs. The example could let us discuss the reason(s) why it fails.

- Find out if there is any report presenting the technical detail of the DocPie system. Below lists a few blogs which introduce AI contract review and generation.

  - `https://www.spotdraft.com/blog/ai-contract-generator`.
  - `https://www.spotdraft.com/blog/ai-contract-review-tools-transform-legal -workflows`.
  - `https://www.top.legal/en/knowledge/analyze-existing-contracts`.

- Find out if DocPie is the only legal contract generator and advisor system in the world. Clearly, it is not.
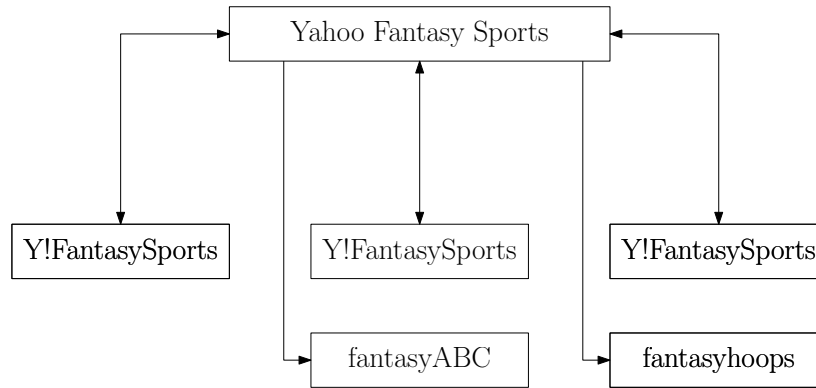
Figure 3: A system architecture for the interaction among the Yahoo Fantasy Sports server and the associated software in basketball games. *fantasyABC* and *fantasyhoops* are companion software providing recommendations for the game players. *Y!FantasySports* is the software for a game player to set the list of players to be showing up in the coming tournament.

- Find similar system(s) available for use in other countries. Below lists a few of them.

    - `https://www.getsmartdoc.com/`.
    - `https://www.legalontech.com/ai-contract-review-software`.

- Find out if there is any AI element applied in this *Fantasy Games*. If yes, state clearly in which part the AI has been applied.

- You writing is the best among the other written reports.

4.5 Ting-Hsien Lin

- The contents in the presentation slides are not well organized.

- The following link from Yahoo has introduced how players can enjoy the Yahoo Fantasy Sports.

    - `https://sports.yahoo.com/yahoo-fantasy-basketball-a-101-guide-on-how-to-play-225349765.html`.

- The original system architecture in your slides should not be correct. The roles of Yahoo Fantasy Sports server have not completely stated.

- The organization of the steps in the illustrative example is confusing. At least two Apps have to be installed in an iPhone to play the Yahoo Fantasy Basketball games.

    - One of it is the *Yahoo Fantasy*. It is for viewing player statistics from the Yahoo Fantasy and setting your player list for the tournament of the week.
    - The other App is an analytic software, like *Fantasyhoops*, which is able to give recommendations for a game player.

    In view of the above comments, a possible architecture is shown in Figure 3.

- The method how Yahoo Fantasy Sports scores on a tournament is missing. Here is a link for your reference.

- https://help.yahoo.com/kb/SLN6868.html/.

- As mentioned in the class, Yahoo Fantasy Sports server should have provided at least three functions.

  - First, it initiates the schedule of the tournaments of the ten basketball teams in the season.
  - Second, it provides player statistics for the game players to analyze and decide which players are showing up in the coming tournament.
  - Third, it determine the scores of all tournaments in a week.

- Find out if there is any AI element applied in this *Fantasy Games*. If yes, state clearly in which part the AI has been applied.

4.6   Ken Lin

- Technical contents regarding *Stable Diffusion* and *GAN* should not be mentioned. You do not know much about them.

- The full name of *GAN* is *generative adversarial network*. This model was introduced in 2014 and has been mentioned on the course homepage.

- You could introduce in the beginning of your report some popular AI-based image generators, including OpenAI DALL-E, Midjourney and Stable Diffusion. In terms of their functionalities, give a brief comparison.

- In your report, you should give more successful examples. For instance, generating a polar bear with six limbs is a good successful example.

- Image generation is the key function of all AI image generators. You should dig in how do they help in your daily works. For instance, how does Midjourney help you completing a sales report or a marketing plan.

- As witnessed from Youtube, some youtubers have recently used some sort of AI image generators to generate images and add them in their videos.

- There are two reasons leading for unsuccessful application of an AI tool. (1) There is technical limitation in the AI tool. (2) The user is too weak to use the tool.

4.7   Kemmer Wu

- To manage to use of a language for communication, one needs to have three important skills which are namely (1) read/write, (2) listen/speak and (3) think. The last skill, *think in English* (resp. *think in Chinese*), is the most difficult.

- In the old days, the so-called language blindness could *listen/speak and think* in his/her mother language but he/she was unable to read/write.

- It should be noted that each English learning software is designed for a specific group of learners. For instance, Duolingo is designed for the learners who are going to take an English proficiency examination. Elsa Speak is designed for the learners who would like to improve their pronunciation and their daily use of English. Thus, Elsa Speak is particularly useful for the Asians who have already been living in the USA and will stay there for years.

- It seems that *Speak* only provides English listening and speaking curriculums for a user. Reading and writing curriculums are not provided.

- It seems that all English language apps do not provide reading and writing curriculums.

- From the official website of *Speak*, I can only find that the app is made available for iOS and Android. Please double check if there is no Windows (resp. MacOS) version.

- If there is no Windows (resp. MacOS) version, we can conclude that the customers of *Speak* are iOS and Android phones users only.

- Find out if there is any AI element applied in this *Fantasy Games*. If yes, state clearly in which part the AI has been applied.

5   About Final Project Presentations

Your final project presentations will be scheduled the Week 17 (January 3, 2025) and Week 18 (January 10, 2025) classes. In contrast to the progress report, each student will have only 30 minutes for your presentation, including question and answer.

Note: Your final project presentations are treated as your final examination. Absence from Week 17 or Week 18 presentation will be considered as absence from final examination. Your score on the final project presentation will be zero. That is to say, all of you have to show up in Week 18 even if you have already presented on Week 17.

6   Conclusions

In this document, the purposes of this survey report have been re-iterated. Subsequently, I have added both general comments and specific comments for the presenters who have completed their presentations on November 8, 2024. Specifically, the five-stage framework from the OpenAI on the five types of AI systems to be developed has been clarified. The contents included in this document are clearly not the final version. After November 15, 2024, further comments will be added in this document as a reference for the students to excel their final project reports..