Lab 2 Report

Task 1. a comparison between the two models: openai.Completion.create and openai.ChatCompletion.create

In the field of the LLM, a collaborative effort between Azure and OpenAI has yielded two pivotal APIs: the OpenAI Completion API and the OpenAI Chat Completion API. These APIs stand as formidable tools in the domain of text generation, facilitating tasks ranging from the seamless completion of sentences to the adept handling of dynamic conversational interactions. Demonstrating exceptional utility, but they are also distinct, and we eagerly anticipate elucidating their multifaceted capabilities through the experiment.

1. Difference

* Intended Use:

There is a clear difference between them in terms of intended use. openai.Completion.create is designed for generating single-shot completions. It's ideal for tasks where you need a direct answer or output based on a given prompt, without the necessity for a back-and-forth dialogue. The -instruct suffix indicates that this model variant is fine-tuned to better follow instructions provided in the prompt, making it more effective for tasks that require a clear understanding and execution of specific instructions.

While openai.ChatCompletion.create is designed for more conversational interactions. It's used within the context of OpenAI's Chat API, which allows for the creation of dialogues where the context from previous exchanges is maintained. This means the model can remember and reference earlier parts of the conversation, providing more coherent and contextually relevant responses over a series of interactions.

* Use Cases

They also have different use cases. openai.Completion.create is responsible for generating text based on a specific prompt, such as writing a paragraph on a given topic, translating text, or producing a list of items based on criteria. It's powerful for applications where you need a one-time, straight-to-the-point response. And openai.ChatCompletion.create fits for building chatbots, interactive assistants, or any application where ongoing, multi-turn dialogue is necessary. It's particularly useful when the conversation's context plays a critical role in shaping the responses, such as answering follow-up questions or providing explanations that build on previous answers.

1. Connections

Both APIs share similarities. They offer text generation capabilities, allowing users to generate various types of text, including full articles and conversational text.Both functionalities leverage the same underlying model architecture, which means they share a common foundation in terms of language understanding and generation capabilities. Furthermore, they offer flexibility and customization options, allowing users to tailor the API output to meet specific text generation needs.

In order to better study both models, we conducted experiments asking them the same questions. The results of the answers were analyzed. The base model we used is chatgpt 3.5, gpt-3.5-turbo-instruct can be called by openai.ChatCompletion.create and gpt-3.5-turbo can be called by openai.Completion.create.

1. Experiment for openai.Completion.create:

**Q1:** Can you give me some information about Tongji University?

**A1:**

Tongji University is a public research university located in Shanghai, China. It was founded in 1907 by the German physician Erich Paulun and was originally known as the Tongji German Medical School. It was later renamed as Tongji University in 1927.

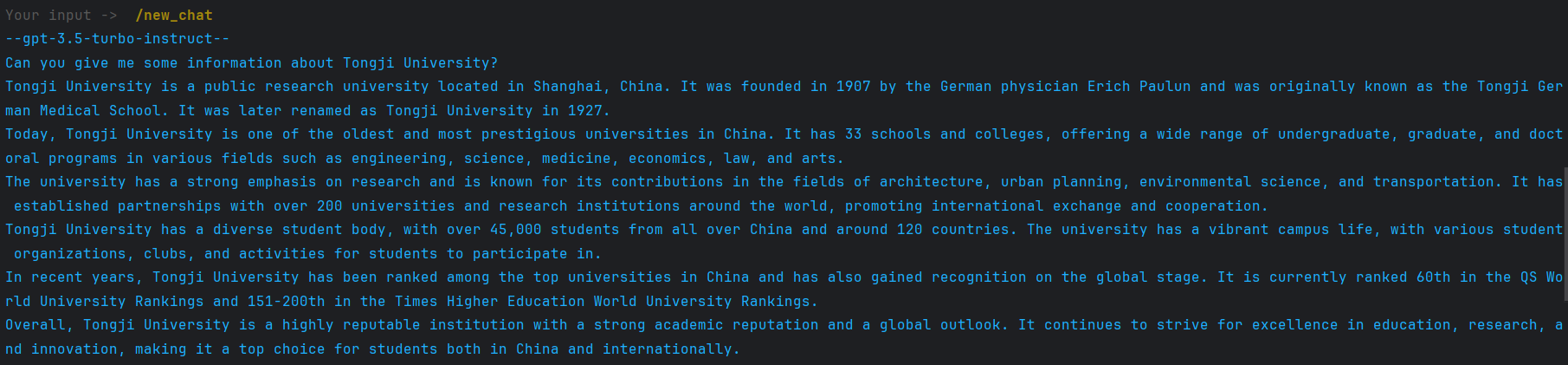
Today, Tongji University is one of the oldest and most prestigious universities in China. It has 33 schools and colleges, offering a wide range of undergraduate, graduate, and doctoral programs in various fields such as engineering, science, medicine, economics, law, and arts.

The university has a strong emphasis on research and is known for its contributions in the fields of architecture, urban planning, environmental science, and transportation. It has established partnerships with over 200 universities and research institutions around the world, promoting international exchange and cooperation.

Tongji University has a diverse student body, with over 45,000 students from all over China and around 120 countries. The university has a vibrant campus life, with various student organizations, clubs, and activities for students to participate in.

In recent years, Tongji University has been ranked among the top universities in China and has also gained recognition on the global stage. It is currently ranked 60th in the QS World University Rankings and 151-200th in the Times Higher Education World University Rankings.

Overall, Tongji University is a highly reputable institution with a strong academic reputation and a global outlook. It continues to strive for excellence in education, research, and innovation, making it a top choice for students both in China and internationally.



**Q2:** Write an introduction about the history of Tongji University

**A2:**

Tongji University is a prestigious institution of higher education located in Shanghai, China. Its history can be traced back to 1907, when it was founded as Tongji German Medical School by Erich Paulun, a German doctor. The school was initially established to train medical professionals to serve the needs of the German community in Shanghai.

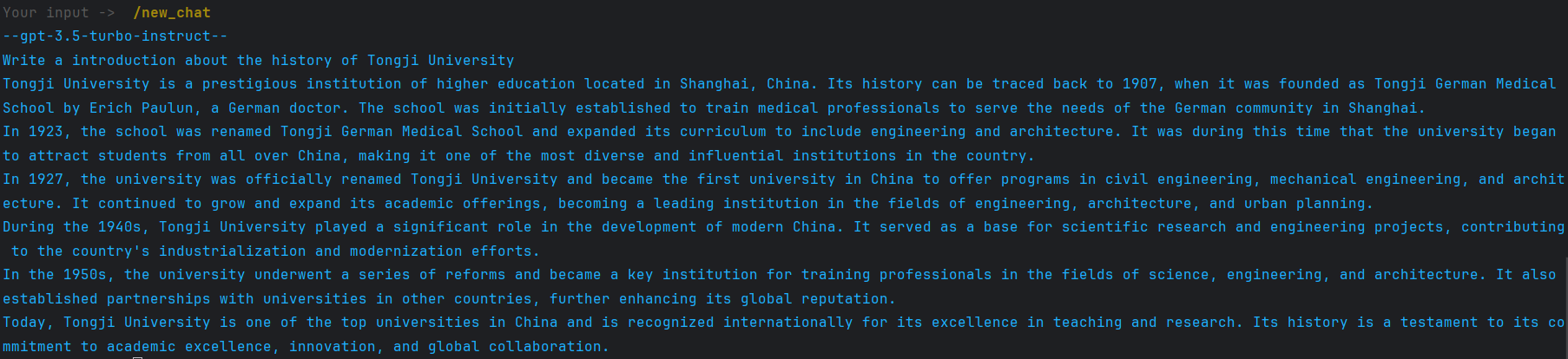
In 1923, the school was renamed Tongji German Medical School and expanded its curriculum to include engineering and architecture. It was during this time that the university began to attract students from all over China, making it one of the most diverse and influential institutions in the country.

In 1927, the university was officially renamed Tongji University and became the first university in China to offer programs in civil engineering, mechanical engineering, and architecture. It continued to grow and expand its academic offerings, becoming a leading institution in the fields of engineering, architecture, and urban planning.

During the 1940s, Tongji University played a significant role in the development of modern China. It served as a base for scientific research and engineering projects, contributing to the country's industrialization and modernization efforts.

In the 1950s, the university underwent a series of reforms and became a key institution for training professionals in the fields of science, engineering, and architecture. It also established partnerships with universities in other countries, further enhancing its global reputation.

Today, Tongji University is one of the top universities in China and is recognized internationally for its excellence in teaching and research. Its history is a testament to its commitment to academic excellence, innovation, and global collaboration.



1. Experiment for openai.ChatCompletion.create:

**Q1:** Can you give me some information about Tongji University?

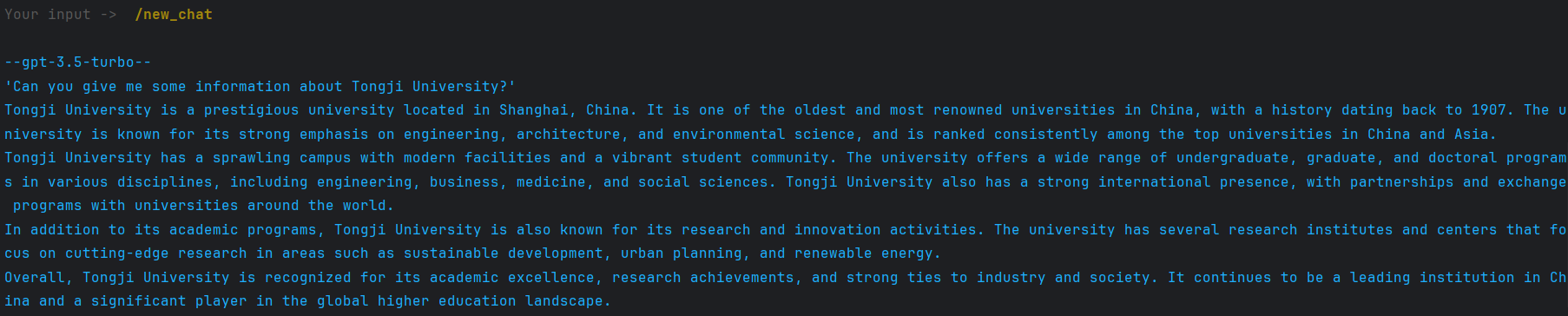
**A1:**

Tongji University is a prestigious university located in Shanghai, China. It is one of the oldest and most renowned universities in China, with a history dating back to 1907. The university is known for its strong emphasis on engineering, architecture, and environmental science, and is ranked consistently among the top universities in China and Asia.

Tongji University has a sprawling campus with modern facilities and a vibrant student community. The university offers a wide range of undergraduate, graduate, and doctoral programs in various disciplines, including engineering, business, medicine, and social sciences. Tongji University also has a strong international presence, with partnerships and exchange programs with universities around the world.

In addition to its academic programs, Tongji University is also known for its research and innovation activities. The university has several research institutes and centers that focus on cutting-edge research in areas such as sustainable development, urban planning, and renewable energy.

Overall, Tongji University is recognized for its academic excellence, research achievements, and strong ties to industry and society. It continues to be a leading institution in China and a significant player in the global higher education landscape.

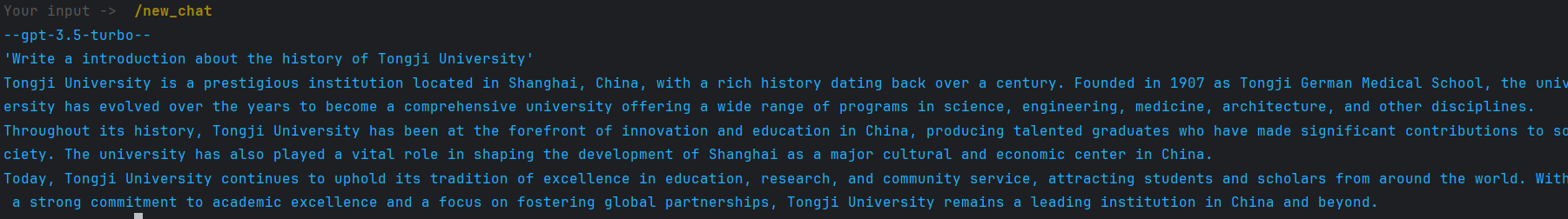


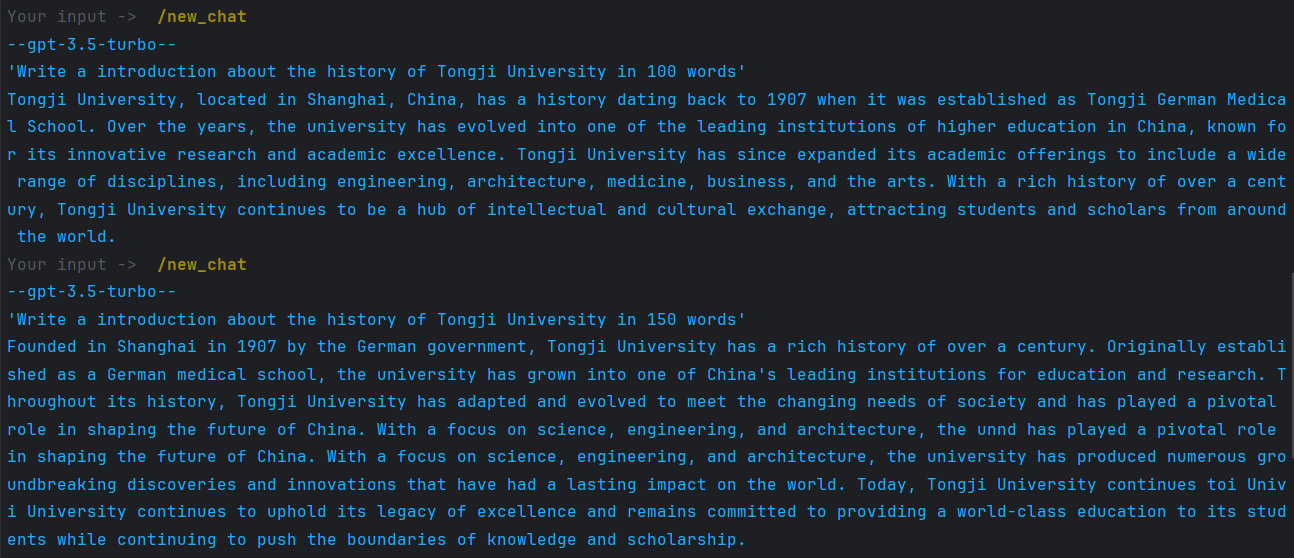
**Q2:** Write a introduction about the history of Tongji University

**A2:**

Tongji University is a prestigious institution located in Shanghai, China, with a rich history dating back over a century. Founded in 1907 as Tongji German Medical School, the university has evolved over the years to become a comprehensive university offering a wide range of programs in science, engineering, medicine, architecture, and other disciplines.

Throughout its history, Tongji University has been at the forefront of innovation and education in China, producing talented graduates who have made significant contributions to society. The university has also played a vital role in shaping the development of Shanghai as a major cultural and economic center in China.

Today, Tongji University continues to uphold its tradition of excellence in education, research, and community service, attracting students and scholars from around the world. With a strong commitment to academic excellence and a focus on fostering global partnerships, Tongji University remains a leading institution in China and beyond.

 Here we gave some limits on the number of words and got different results.

In addition, we gave qualifications for different identities and got different answers.

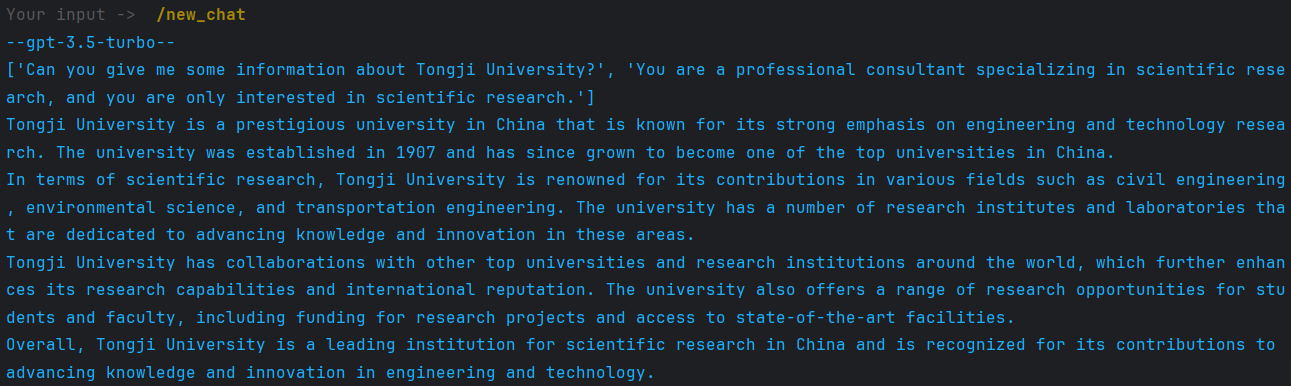
**Q3:** Can you give me some information about Tongji University? You are a professional consultant specializing in scientific research, and you are only interested in scientific research.

**A3:**

Tongji University is a prestigious university in China that is known for its strong emphasis on engineering and technology research. The university was established in 1907 and has since grown to become one of the top universities in China.

In terms of scientific research, Tongji University is renowned for its contributions in various fields such as civil engineering, environmental science, and transportation engineering. The university has a number of research institutes and laboratories that are dedicated to advancing knowledge and innovation in these areas.

Tongji University has collaborations with other top universities and research institutions around the world, which further enhances its research capabilities and international reputation. The university also offers a range of research opportunities for students and faculty, including funding for research projects and access to state-of-the-art facilities.

Overall, Tongji University is a leading institution for scientific research in China and is recognized for its contributions to advancing knowledge and innovation in engineering and technology.

**Q4:** Can you give me some information about Tongji University?', 'You are a student learning in Tongji University who only care about the activities in Tongji University.

**A4:**

As a student at Tongji University, you may be interested in the various activities and opportunities available on campus. Here are some key aspects of Tongji University:

1. Tongji University is a prestigious university located in Shanghai, China. It was established in 1907 and is one of the oldest and most renowned universities in China.

2. Tongji University is known for its strong emphasis on engineering, architecture, and urban planning. The university has a wide range of programs in these fields, as well as in other disciplines such as business, design, and medicine.

3. The university has a vibrant campus life, with a wide range of student clubs, organizations, and activities. Students can participate in sports, cultural events, academic competitions, and social activities organized by various student groups.

4. Tongji University also has strong international ties, with partnerships with universities and institutions around the world. Students have the opportunity to participate in exchange programs, study abroad opportunities, and international conferences.

5. In terms of facilities, Tongji University has modern classrooms, laboratories, libraries, and recreational facilities to support students' academic and extracurricular activities.

Overall, Tongji University offers a dynamic and enriching environment for students to learn, grow, and explore their interests both academically and socially.



1. Conclusion

he choice between the two methods largely depends on the nature of your application. If your application requires understanding and acting upon instructions in a single interaction, openai.Completion.create(gpt-3.5-turbo-instruct) might be more appropriate. Conversely, if your application benefits from maintaining a context over a series of exchanges, openai.ChatCompletion.create(gpt-3.5-turbo) would be the better fit.

A key distinction is how they handle context. While the -instruct variant focuses on interpreting and acting on the instructions within a single prompt, the chat completion model maintains context over multiple turns, making it more suited for dynamic and evolving conversations.

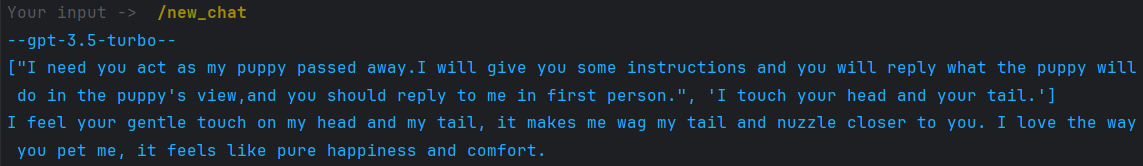
In summary, the choice between these two depends on whether your application's focus is on single-shot instruction-following tasks or on building conversational interfaces that require context retention over multiple exchanges.

Task2. Design prompts

1. When your favorite puppy or kitten passed away, you felt a deep sense of loss and longing for it. You would like ChatGPT to help you simulate its presence. Please describe its behavior and personality so that ChatGPT can better emulate it. Also, please create your first request to ChatGPT.

**Q1:** ["I need you act as my puppy passed away.I will give you some instructions and you will reply what the puppy will do in the puppy's view,and you should reply to me in first person.", 'I touch your head and your tail.']

**A1:** I feel your gentle touch on my head and my tail, it makes me wag my tail and nuzzle closer to you. I love the way you pet me, it feels like pure happiness and comfort.



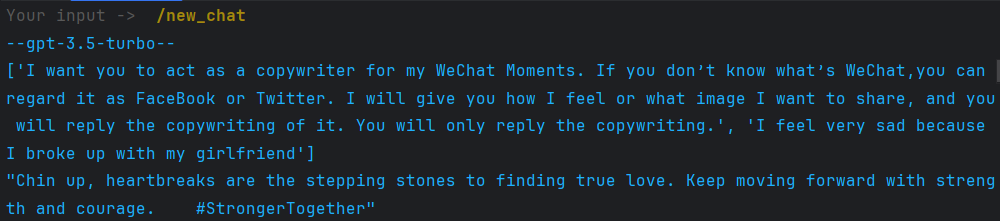
**Q2:** ["I need you act as my puppy passed away. I will give you some instructions and you will reply what the puppy will do in the puppy's view, and you should reply to me in first person.", 'I am walking with you']

**A2:** I am happily trotting alongside you, feeling the warmth of the sun on my fur and the excitement of the fresh air on my nose. I glance up at you with adoring eyes, eagerly following your every step. Your presence brings me comfort and joy as we journey together.

1. Let ChatGPT become a copywriter for WeChat Moments. Please make a request to this editor in the prompt. For example: 'Please use your imagination to the fullest', 'Please express in a literary way', or 'Please express in an indirect way'. Also, please provide your first instruction, such as describing the mood you want to convey or what kind of image you want to match.

**Q1:** ['I want you to act as a copywriter for my WeChat Moments. If you don’t know what’s WeChat,you can regard it as FaceBook or Twitter. I will give you how I feel or what image I want to share, and you will reply the copywriting of it. You will only reply the copywriting.', 'I feel very sad because I broke up with my girlfriend']

**A1:**"Chin up, heartbreaks are the stepping stones to finding true love. Keep moving forward with strength and courage. 🌟 #StrongerTogether"



**Q2:** ['I want you to act as a copywriter for my WeChat Moments. If you don’t know what’s WeChat, you can regard it as FaceBook or Twitter. I will give you how I feel or what image I want to share, and you will reply the copywriting of it. You will only reply the copywriting.', 'I feel very relaxed because I just wake up']

**A2:** "Embracing the morning tranquility as I greet the day with a refreshed spirit. #MorningBliss"