```
Looking in indexes: <a href="https://pypi.org/simple">https://us-python.pkg.dev/colab-wheels/public/simple/</a>
     Requirement already satisfied: llama-index in /usr/local/lib/python3.10/dist-packages (0.6.5)
     Requirement already satisfied: anthropic in /usr/local/lib/python3.10/dist-packages (0.2.8)
     Requirement already satisfied: rich<13.0.1 in /usr/local/lib/python3.10/dist-packages (13.0.0)
     Requirement already satisfied: pdf2image in /usr/local/lib/python3.10/dist-packages (1.16.3)
     Requirement already satisfied: pytesseract in /usr/local/lib/python3.10/dist-packages (0.3.10)
     Requirement already satisfied: nest_asyncio in /usr/local/lib/python3.10/dist-packages (1.5.6)
     Requirement already satisfied: dataclasses-json in /usr/local/lib/python3.10/dist-packages (from llama-index) (0.5.7)
     Requirement already satisfied: langchain>=0.0.154 in /usr/local/lib/python3.10/dist-packages (from llama-index) (0.0.167)
     Requirement already satisfied: numpy in /usr/local/lib/python3.10/dist-packages (from llama-index) (1.22.4)
     Requirement already satisfied: tenacity<9.0.0,>=8.2.0 in /usr/local/lib/python3.10/dist-packages (from llama-index) (8.2.2)
     Requirement already satisfied: openai>=0.26.4 in /usr/local/lib/python3.10/dist-packages (from llama-index) (0.27.6)
     Requirement already satisfied: pandas in /usr/local/lib/python3.10/dist-packages (from llama-index) (1.5.3)
     Requirement already satisfied: requests<2.30.0 in /usr/local/lib/python3.10/dist-packages (from llama-index) (2.27.1)
     Requirement already satisfied: tiktoken in /usr/local/lib/python3.10/dist-packages (from llama-index) (0.4.0)
     Requirement already satisfied: httpx in /usr/local/lib/python3.10/dist-packages (from anthropic) (0.23.3)
     Requirement already satisfied: tokenizers in /usr/local/lib/python3.10/dist-packages (from anthropic) (0.13.3)
     Requirement already satisfied: aiohttp in /usr/local/lib/python3.10/dist-packages (from anthropic) (3.8.4)
     Requirement already satisfied: commonmark<0.10.0,>=0.9.0 in /usr/local/lib/python3.10/dist-packages (from rich<13.0.1) (0.9.1)
     Requirement already satisfied: pygments<3.0.0,>=2.6.0 in /usr/local/lib/python3.10/dist-packages (from rich<13.0.1) (2.14.0)
     Requirement already satisfied: pillow in /usr/local/lib/python3.10/dist-packages (from pdf2image) (8.4.0)
     Requirement already satisfied: packaging>=21.3 in /usr/local/lib/python3.10/dist-packages (from pytesseract) (23.1)
     Requirement already satisfied: PyYAML>=5.4.1 in /usr/local/lib/python3.10/dist-packages (from langchain>=0.0.154->llama-index) (6.0)
     Requirement already satisfied: SQLAlchemy<3,>=1.4 in /usr/local/lib/python3.10/dist-packages (from langchain>=0.0.154->llama-index) (2.0
     Requirement already satisfied: async-timeout<5.0.0,>=4.0.0 in /usr/local/lib/python3.10/dist-packages (from langchain>=0.0.154->llama-in
     Requirement already satisfied: numexpr<3.0.0,>=2.8.4 in /usr/local/lib/python3.10/dist-packages (from langchain>=0.0.154->llama-index) (
     Requirement already satisfied: openapi-schema-pydantic<2.0,>=1.2 in /usr/local/lib/python3.10/dist-packages (from langchain>=0.0.154->ll
     Requirement already satisfied: pydantic<2,>=1 in /usr/local/lib/python3.10/dist-packages (from langchain=0.0.154->llama-index) (1.10.7)
     Requirement already satisfied: tqdm>=4.48.0 in /usr/local/lib/python3.10/dist-packages (from langchain>=0.0.154->llama-index) (4.65.0)
     Requirement already satisfied: attrs>=17.3.0 in /usr/local/lib/python3.10/dist-packages (from aiohttp->anthropic) (23.1.0)
     Requirement already satisfied: charset-normalizer<4.0,>=2.0 in /usr/local/lib/python3.10/dist-packages (from aiohttp->anthropic) (2.0.12
     Requirement already satisfied: multidict<7.0,>=4.5 in /usr/local/lib/python3.10/dist-packages (from aiohttp->anthropic) (6.0.4)
     Requirement already satisfied: yarl<2.0,>=1.0 in /usr/local/lib/python3.10/dist-packages (from aiohttp->anthropic) (1.9.2)
     Requirement already satisfied: frozenlist>=1.1.1 in /usr/local/lib/python3.10/dist-packages (from aiohttp->anthropic) (1.3.3)
     Requirement already satisfied: aiosignal>=1.1.2 in /usr/local/lib/python3.10/dist-packages (from aiohttp->anthropic) (1.3.1)
     Requirement already satisfied: marshmallow<4.0.0,>=3.3.0 in /usr/local/lib/python3.10/dist-packages (from dataclasses-json->llama-index)
     Requirement already satisfied: marshmallow-enum<2.0.0,>=1.5.1 in /usr/local/lib/python3.10/dist-packages (from dataclasses-json->llama-i
     Requirement already satisfied: typing-inspect>=0.4.0 in /usr/local/lib/python3.10/dist-packages (from dataclasses-json->llama-index) (0.
     Requirement already satisfied: urllib3<1.27,>=1.21.1 in /usr/local/lib/python3.10/dist-packages (from requests<2.30.0->llama-index) (1.2
     Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages (from requests<2.30.0->llama-index) (2022.1
     Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages (from requests<2.30.0->llama-index) (3.4)
     Requirement already satisfied: httpcore<0.17.0,>=0.15.0 in /usr/local/lib/python3.10/dist-packages (from httpx->anthropic) (0.16.3)
     Requirement already satisfied: rfc3986[idna2008]<2,>=1.3 in /usr/local/lib/python3.10/dist-packages (from httpx->anthropic) (1.5.0)
     Requirement already satisfied: sniffio in /usr/local/lib/python3.10/dist-packages (from httpx->anthropic) (1.3.0)
     Requirement already satisfied: python-dateutil>=2.8.1 in /usr/local/lib/python3.10/dist-packages (from pandas->llama-index) (2.8.2)
     Requirement already satisfied: pytz>=2020.1 in /usr/local/lib/python3.10/dist-packages (from pandas->llama-index) (2022.7.1)
     Requirement already satisfied: regex>=2022.1.18 in /usr/local/lib/python3.10/dist-packages (from tiktoken->llama-index) (2022.10.31)
     Requirement already satisfied: h11<0.15,>=0.13 in /usr/local/lib/python3.10/dist-packages (from httpcore<0.17.0,>=0.15.0->httpx->anthrop
     Requirement already satisfied: anyio<5.0,>=3.0 in /usr/local/lib/python3.10/dist-packages (from httpcore<0.17.0,>=0.15.0->httpx->anthrop
     Requirement already satisfied: typing-extensions>=4.2.0 in /usr/local/lib/python3.10/dist-packages (from pydantic<2,>=1->langchain>=0.0.
     Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages (from python-dateutil>=2.8.1->pandas->llama-index) (1
     Requirement already satisfied: greenlet!=0.4.17 in /usr/local/lib/python3.10/dist-packages (from SQLAlchemy<3,>=1.4->langchain>=0.0.154-
     Requirement already satisfied: mypy-extensions>=0.3.0 in /usr/local/lib/python3.10/dist-packages (from typing-inspect>=0.4.0->dataclasse
    4
# download files
Imkdir data
!wget https://www.dropbox.com/s/948jr9cfs7fgj99/UBER.zip?dl=1 -O data/UBER.zip
!unzip data/UBER.zip -d data
⇒ mkdir: cannot create directory 'data': File exists
     --2023-05-12 17:51:09-- <a href="https://www.dropbox.com/s/948jr9cfs7fgj99/UBER.zip?dl=1">https://www.dropbox.com/s/948jr9cfs7fgj99/UBER.zip?dl=1</a>
     Resolving www.dropbox.com (www.dropbox.com)... 162.125.5.18, 2620:100:601d:18::a27d:512
     Connecting to <a href="https://www.dropbox.com">www.dropbox.com</a>) | 162.125.5.18 | :443... connected.
     HTTP request sent, awaiting response... 302 Found
     Location: /s/dl/948jr9cfs7fgj99/UBER.zip [following]
     --2023-05-12 17:51:09-- <a href="https://www.dropbox.com/s/dl/948jr9cfs7fgj99/UBER.zip">https://www.dropbox.com/s/dl/948jr9cfs7fgj99/UBER.zip</a>
     Reusing existing connection to <a href="https://www.dropbox.com:443">www.dropbox.com:443</a>.
     HTTP request sent, awaiting response... 302 Found
     Location: https://uc0857a17a901fcb03bde45b56d1.dl.dropboxusercontent.com/cd/0/get/B77zHtNAN-IWEkcJNF3pzM1nG0nXUIVMaJ7g0z8yHolk25d09FYHhh
     --2023-05-12 17:51:10-- https://uc0857a17a901fcb03bde45b56d1.dl.dropboxusercontent.com/cd/0/get/B77zHtNAN-IWEkcJNF3pzM1nG0nXUIVMaJ7q028
     Resolving uc0857a17a901fcb03bde45b56d1.dl.dropboxusercontent.com (uc0857a17a901fcb03bde45b56d1.dl.dropboxusercontent.com)... 162.125.5.1
     Connecting to uc0857a17a901fcb03bde45b56d1.dl.dropboxusercontent.com (uc0857a17a901fcb03bde45b56d1.dl.dropboxusercontent.com)|162.125.5.
     HTTP request sent, awaiting response... 200 OK
     Length: 1820227 (1.7M) [application/binary]
     Saving to: 'data/UBER.zip'
                         100%[===========] 1.74M 11.1MB/s in 0.2s
     data/UBER.zip
```

```
2023-05-12 17:51:10 (11.1 MB/s) - 'data/UBER.zip' saved [1820227/1820227]
     Archive: data/UBER.zip
     replace data/UBER/UBER_2021.html? [y]es, [n]o, [A]ll, [N]one, [r]ename:
import os
os.environ["ANTHROPIC_API_KEY"] = ""
import logging
import sys
logging.basicConfig(stream=sys.stdout, level=logging.INFO)
logging.getLogger().addHandler(logging.StreamHandler(stream=sys.stdout))\\
from llama_index import (
    GPTVectorStoreIndex,
    GPTListIndex,
    SimpleDirectoryReader,
    ServiceContext,
    LLMPredictor,
    PromptHelper
from langchain.llms import Anthropic
import nest_asyncio
nest_asyncio.apply()
# define LLM
# define prompt helper
# set maximum input size
max_input_size = 100000
# set number of output tokens
num_output = 2048
# set maximum chunk overlap
max_chunk_overlap = 20
prompt_helper = PromptHelper(max_input_size, num_output, max_chunk_overlap)
llm\_predictor = LLMPredictor(llm=Anthropic(model="claude-v1.3-100k", temperature=0, max\_tokens\_to\_sample=num\_output))
service_context = ServiceContext.from_defaults(
    llm_predictor=llm_predictor, prompt_helper=prompt_helper,
    chunk_size_limit=95000
)
🚁 /usr/local/lib/python3.10/dist-packages/langchain/llms/anthropic.py:134: UserWarning: This Anthropic LLM is deprecated. Please use `from
       warnings.warn(
     4
Load in Data
Through Unstructured.io
```

```
from llama_index import download_loader
from pathlib import Path

UnstructuredReader = download_loader("UnstructuredReader", refresh_cache=True)

loader = UnstructuredReader()
doc_set = {}
all_docs = []
years = [2022, 2021, 2020, 2019]
for year in years:
    year_doc = loader.load_data(file=Path(f'./data/UBER/UBER_{year}.html'), split_documents=False)[0]
    # insert year metadata into each year
    year_doc.extra_info = {"year": year}
    doc_set[year] = year_doc
    all_docs.append(year_doc)
```

```
→ [nltk_data] Downloading package punkt to /root/nltk_data...
       [nltk_data]
                         Package punkt is already up-to-date!
       [nltk data] Downloading package averaged perceptron tagger to
       [nltk data]
                            /root/nltk data...
       [nltk_data]
                         Package averaged_perceptron_tagger is already up-to-
       [nltk_data]
                               date!
doc_set[2019]
 Document(text='UNITED STATES\n\nSECURITIES AND EXCHANGE COMMISSION\n\nWashington, D.C.
                                                                             \n n\n ORM\n n10-K\n\n
       One)\n\nANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934\n\nFor the fiscal year ended\n\nDecember
       31, 2019\n\nOR\n\nTRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934\n\nFor the transition
                                       \n\
       period from
                           to
       TECHNOLOGIES, INC.\n\n(Exact name of registrant as specified in its
                                                                                 \n\nDelaware\n\n45-2647441\n\n(State or other jurisdiction of incorporation
       or organization)\n\n(I.R.S. Employer Identification No.)\n\n1455 Market Street, 4th Floor\n\nSan
       \n\nSecurities registered pursuant to Section
       telephone number, including area code)\n\n_
       12(b) of the Act:\n\nTitle of each class\n\nTrading Symbol(s)\n\nName of each exchange on which registered\n\nCommon Stock, par value
       $0.00001 per share\n\nUBER\n\nNew York Stock Exchange\n\nSecurities registered pursuant to Section 12(g) of the Act: None\n\nIndicate
       by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
       Yes\n\nNo\nIndicate by check mark whether the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of
       the Act. Yes\n\nNo\n\nIndicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or
       15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was
       required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.\n\nYes\n\nNo\n\nIndicate
       by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to
       Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant
       was required to submit such files).\n\nYes\n\nNo\n\nIndicate by check mark whether the registrant is a large accelerated filer, an
       accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large
       accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange
       Act.\n\nLarge accelerated filer\n\nAccelerated filer\n\nNon-accelerated filer\n\nSmaller reporting company\n\nEmerging growth
       company\n\nIf an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition
       period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange
       Act.\n\nIndicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
       Yes\n\nNo\nThe aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of
       June 28, 2019, the last business day of the registrant\'s most recently completed second fiscal quarter, was approximately\n\n$59.7
       billion\n\nbased upon the closing price reported for such date on the New York Stock Exchange.\n\nThe number of shares of the
       registrant\'s common stock outstanding as of\n\nFebruary 19, 2020\n\nwas\n\n1,723,775,076\n\nDOCUMENTS INCORPORATED BY
       REFERENCE\n\nPortions of the registrant's Definitive Proxy Statement relating to the Annual Meeting of Stockholders are incorporated
       by reference into Part III of this Annual Report on Form 10-K where indicated. Such Definitive Proxy Statement will be filed with the
       Securities and Exchange Commission within 120 days after the end of the registrant's fiscal year ended December 31,\n\n2019\n\nUBER
       TECHNOLOGIES, INC.\n\nTABLE OF CONTENTS\n\nPages\n\nSpecial Note Regarding Forward-Looking Statements\n\nPART I\n\nItem
       1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 1. \\ \ 
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       K\n\ncontains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements
       other than statements of historical facts contained in this\n\nAnnual\n\nReport on Form\n\n10-K\n\n, including statements regarding
       our future results of operations or financial condition, business strategy and plans, and objectives of management for future
      operations, are forward-looking statements. In some cases, you can identify forward-looking statements because they contain words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "hope," "intend," "may," "might," "objective," "ongoing," "plan," "potential," "predict," "project," "should," "target," "will," or "would" or the negative of these words or other similar terms or expressions. These forward-looking statements include, but are not limited to, statements concerning
       the following:\n\nour ability to successfully compete in highly competitive markets;\n\nour ability to effectively manage our growth
       and maintain and improve our corporate culture;\n\nour expectations regarding financial performance, including but not limited to
       revenue, Adjusted Net Revenue, potential profitability and the timing thereof, ability to generate positive Adjusted EBITDA,
       expenses, and other results of operations;\n\nour expectations regarding future operating performance, including but not limited to
```

5b167f2c-37b3-4c8c-84a3-58b43f4a963b']

```
# NOTE: the default create/refine approach does not give good answers
query = "What were some of the biggest risk factors in 2019?"
query_engine = list_index.as_query_engine(service_context=service_context)
response = query_engine.query(query)

print(response)
```

Original answer:

Some of the biggest risk factors for Uber in 2019 included:

- Regulatory challenges and uncertainty. Uber faced regulatory challenges and uncertainty in many markets, including restrictions on its
- Competition. The markets in which Uber operates are highly competitive, and Uber faced significant competition from well-established a
- Safety and security. There were risks related to the safety and security of Uber's platform, including risks from vehicle or scooter a
- Financial performance and profitability. Uber continued to experience significant losses in 2019 as it invested in growth. There was n
- Reliance on third parties. Uber relied on third parties for key elements of its business like cloud computing services, payment proces
- Macroeconomic conditions. Uber's business was sensitive to economic conditions and changes that impacted discretionary consumer spendi
- Reliance on Drivers and Restaurants. Uber's success depended on attracting and retaining enough Drivers and Restaurants to its platfor
- Intellectual property. If Uber was unable to protect its intellectual property, or if third parties claimed Uber was infringing on the Refined answer:

Some of the biggest risk factors for Uber in 2019 included:

- Regulatory challenges and uncertainty. Uber faced significant regulatory challenges in 2019, including AB5 in California which increas
- Competition. The ridesharing and meal delivery markets are highly competitive, and competitors offered significant incentives and disc
- Safety and security. There were risks related to the safety and security of Uber's platform, including risks from vehicle or scooter a
- Financial performance and profitability. Uber continued to experience substantial losses in 2019 due to investments in growth, and the
- Reliance on third parties. Uber relied on third parties for services like cloud computing, payment processing, and background checks.
- Macroeconomic conditions. Uber's business was sensitive to the economy and consumer discretionary spending. An economic downturn could
- Reliance on Drivers and Restaurants. Uber's success depended on attracting and retaining enough Drivers and Restaurants to support gro
- Intellectual property. Failure to protect intellectual property or infringement of others' intellectual property could damage Uber's c

```
# NOTE: tree_summarize gives better answers
query = "What were some of the biggest risk factors in 2019?"
query_engine = list_index.as_query_engine(service_context=service_context, response_mode="tree_summarize")
response = query_engine.query(query)
```

print(response)



- Regulatory challenges and uncertainty: Uber faced significant regulatory challenges and uncertainty in 2019, including AB5 in Californ
- Safety and security: Uber received negative publicity around safety incidents on its platform which could damage its brand and reputat
- Competition: The markets in which Uber competes are intensely competitive, and Uber faces competition from new and existing companies
- Financial losses: Uber continued to experience significant losses from operations in 2019 as it invested in growth. Uber may not achie
- Reliance on third-parties: Uber relies on third-party data centers, cloud computing services, and software which exposes it to risks i
- Macroeconomic conditions: Uber's business is sensitive to macroeconomic conditions, and any downturn could reduce discretionary consum
- Reliance on Drivers and Restaurants: Uber's business depends on attracting and retaining Drivers and Restaurants to its platform. If U

```
query = "What were some of the significant acquisitions?"
query_engine = list_index.as_query_engine(service_context=service_context, response_mode="tree_summarize")
response = query_engine.query(query)
```

print(response)

_

Uber Technologies, Inc. is a technology company that develops and operates proprietary technology applications in the United States and Uber Technologies, Inc. operates through three segments:

•Mobility: Uber's Mobility segment connects consumers with independent providers of ride services for ridesharing services and other for •Delivery: Uber's Delivery segment connects consumers with restaurants and food delivery service providers for meal preparation and deli •Freight: Uber's Freight segment connects carriers with shippers on its platform, enabling carriers to find and book freight loads and s Uber Technologies, Inc. common stock trades on the New York Stock Exchange under the ticker symbol "UBER".

Does this help provide more context and refine the original answer? Let me know if you would like me to clarify or expand on any part of

list_index = GPTListIndex.from_documents(all_docs, service_context=service_context)
list_index.index_struct.nodes

```
['5cef434f-1d6a-4979-bc86-7d586f3dc483',
'2a140528-7bb4-4372-b58e-f0b7f23c7a1f',
'83439a3a-a040-42e2-806f-878d33d4554f',
'9a943b4f-db23-4f69-9866-7c5c906d8255',
'14c565b3-af6f-476b-83d4-c4ebe3dbabd2',
'40087d34-4780-4911-b6d2-78c072d6fd5d',
'98a7a515-2243-4019-8558-801701532fe4',
'7e9414b5-2ff4-4ecb-9a2c-6586785b7ce2']
```

query = "How are the risk factors changing across years? Compare/contrast the risk factors across the SEC filings."
query_engine = list_index.as_query_engine(response_mode="tree_summarize", use_async=False)
response = query_engine.query(query)

print(response)



The risk factors disclosed in Uber's SEC filings have evolved over time based on Uber's business and industry changes. Some of the key d

2017 10-K:

- Focused heavily on risks related to negative publicity, competition, dependence on independent contractors, and regulatory challenges - Also highlighted risks from intellectual property litigation given various IP disputes at the time.

2018 10-K:

- Added more risks related to autonomous vehicles as Uber ramped up its self-driving car efforts. Specifically called out risks from acc
- Removed some risks related to negative publicity and PR crises as those issues had subsided. But added risks related to corporate cult

2019 10-K:

- Further expanded AV risks to include risks from partnerships and third party relationships as Uber relied more on partnerships with ot
- Added risks related to environmental regulations and climate change as those issues received more mainstream attention.
- Removed risks related to initial scaling challenges as Uber had matured as a company. But added risks related to growth into new offer

In summary, Uber's risk factors have evolved to reflect the key issues and challenges facing the company at any point in time. The risks Some of the key trends in how the risk factors are changing include:

- 1. Risks related to negative publicity and PR crises decreased over time as those issues subsided, while risks related to other issues 1
- 2. Risks tend to increase in areas where Uber is actively investing or expanding into. For example, risks related to AVs, partnerships,
- 3. External risks like regulations and climate change were added as those issues gained more mainstream attention and importance. This s
- 4. Certain foundational risks around competition, growth, and reliance on independent contractors persisted over time. But the specifics

 In summary, Uber's risk factors changed over time to provide more details on the company's priorities, challenges, partnerships, and ext

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