

10-K
FILING ANALYSIS

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Technologies Used

1. Python
2. Streamlit
3. sec-edgar-downloader
4. sec-api
5. Awan LLM

- AN LLM WOULD BE OVERKILL

Any plotting or forecasting can easily be done by other python libraries and basic regression analysis, this would be a futile waste of an LLM's resources, what better use to put an LLM than summarize over 60,000 words?

- MANY OTHER TOOLS

Various tools, custom built and proprietary already do this, the scope for creative analysis of a 10-K filing seemed lower in the graphing domain.

Why NOT
stock or ratio's
plotting/foreca
sting?

Why Risk Factors?

- **UNSYSTEMATIC RISKS**

An investor needs to know the unsystematic risks like, management risks, internal flaws involved with a company. It highlights only the company's flaws, whereas a systematic risk would affect the industry.

This helps investors asses their investment with the risk associated with the company

- **LONG TERM RISK ANALYSIS**

By making use of historical data we also see how the company's risk taking ability has evolved over time and how this has been impacted by the company's leadership changes, if any.

This also helps us infer the company's risk capacity to profit ratio helping with investment analysis



```
payload = json.dumps({
    "model": "Meta-Llama-3-8B-Instruct",
    "prompt": f"""Assume you are a great financial analyst
                Provide a brief summary of the risk factors section in the company's
                10-K filing for the specified fiscal year which delimited by triple backticks.
                Return your response which covers the key risk factors of company as
                well as the Potential Impact on Business Operations. Only summarize do not generate
                code. Use points, limit to 200 words.
                ```{text}```
 SUMMARY:
 """
})
```

# Risk Factor Analysis

Try Pitch

By making use of Prompt Engineering, analysis of the extensive section 1A- Risk Factor was undertaken by the LLaMa-3 (Meta-Llama-3-8B-Instruct) model.

```
def process_summary(text):
 summaries=[]
 payload = json.dumps({
 "model": "Meta-Llama-3-8B-Instruct",
 "prompt": f"""You are a great financial analyst
 Provide a brief summary of the risk factors section in the company's 10-K
 filing for the specified fiscal year which delimited by triple backticks.
 Return your response which covers the key risk factors of company as well as
 the Potential Impact on Business Operations.Only summarize and provide it in points. THERE
 SHOULD BE NO CODE.Use points, limit to 200 words.
 """
 """{text}"""
 "SUMMARY":
 """
 })
 response = requests.request("POST", url, headers=headers, data=payload)
 summaries.append(response.json()["choices"][0]["text"])
 return ''.join(summaries)

def get_summary(text):
 text = "".join(text.split())
 summary=process_long_text(text)
 summary=process_summary(summary)
 return summary;
```

# Project Demo



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