# SEC Filings Visualizer

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# Objective

## Problem

- Companies self-report accurate data to the SEC through numerous filings (10-Q, 10-K)

- SEC's online searching tool EDGAR only supports search for one company at a time

- Hard to extract trends over time

- Some external API providers exist but endpoints are limited and inflexible

## Solution

- Visualization tool that compares data for multiple companies (over 8,000 total)

- Reliable: Fetch core data directly from SEC to minimize reliance on third party APIs

- Flexible: Generate visualizations for over 600 metrics from filings

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# Customizable Parameters

METRICS: Choose from 634 metrics including Earnings Per Share, P/E ratio, Debt to Equity, and more

COMPANIES: Input list of company tickers to compare
- program selects around 10 other companies in the same sector/industry if only one company provided

SECTORS or INDUSTRIES: Input list of sectors or industries to compare

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# Types of Visualizations – Line Graph

```
def lineGraph(self, metric: str, tickers: List[str]) -> None:
```
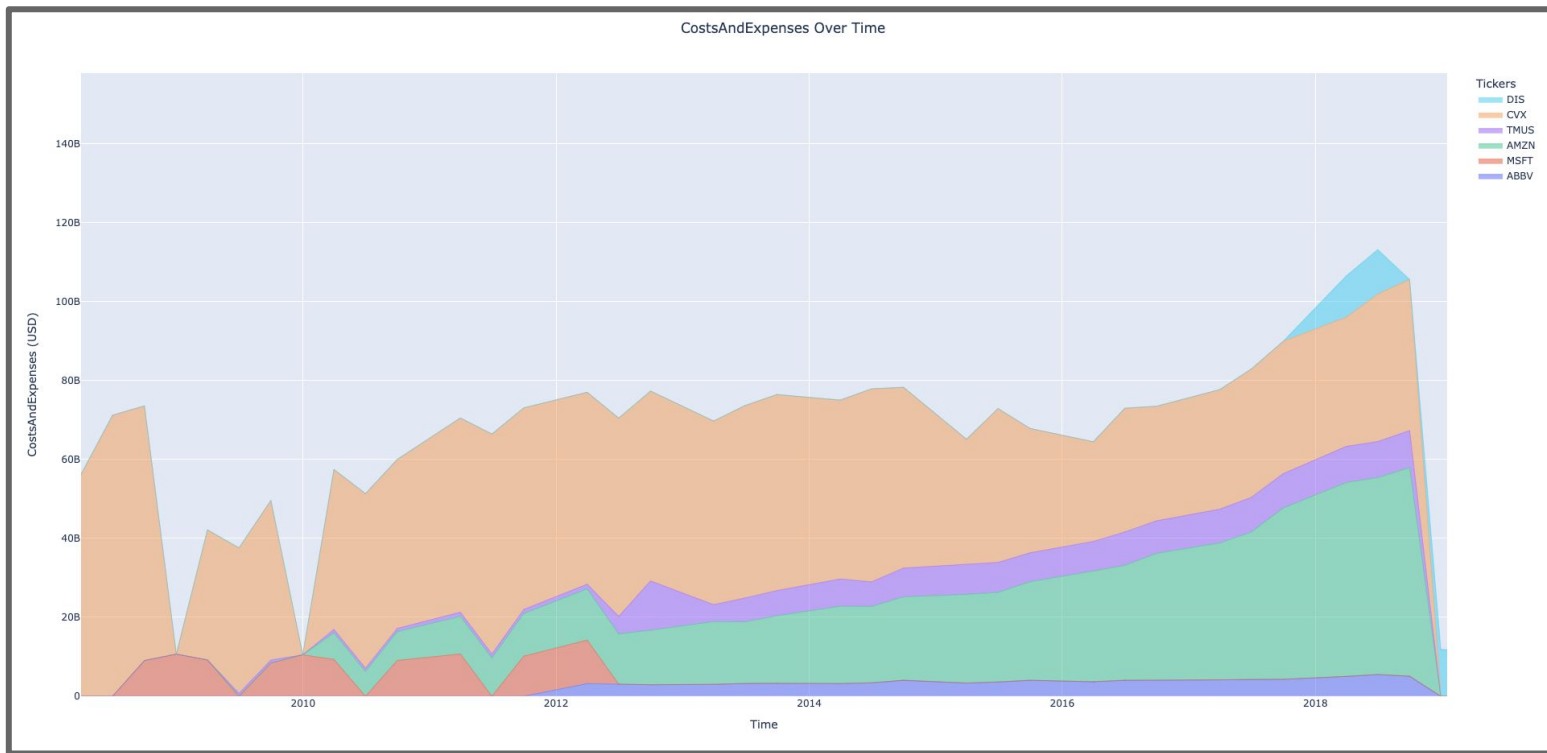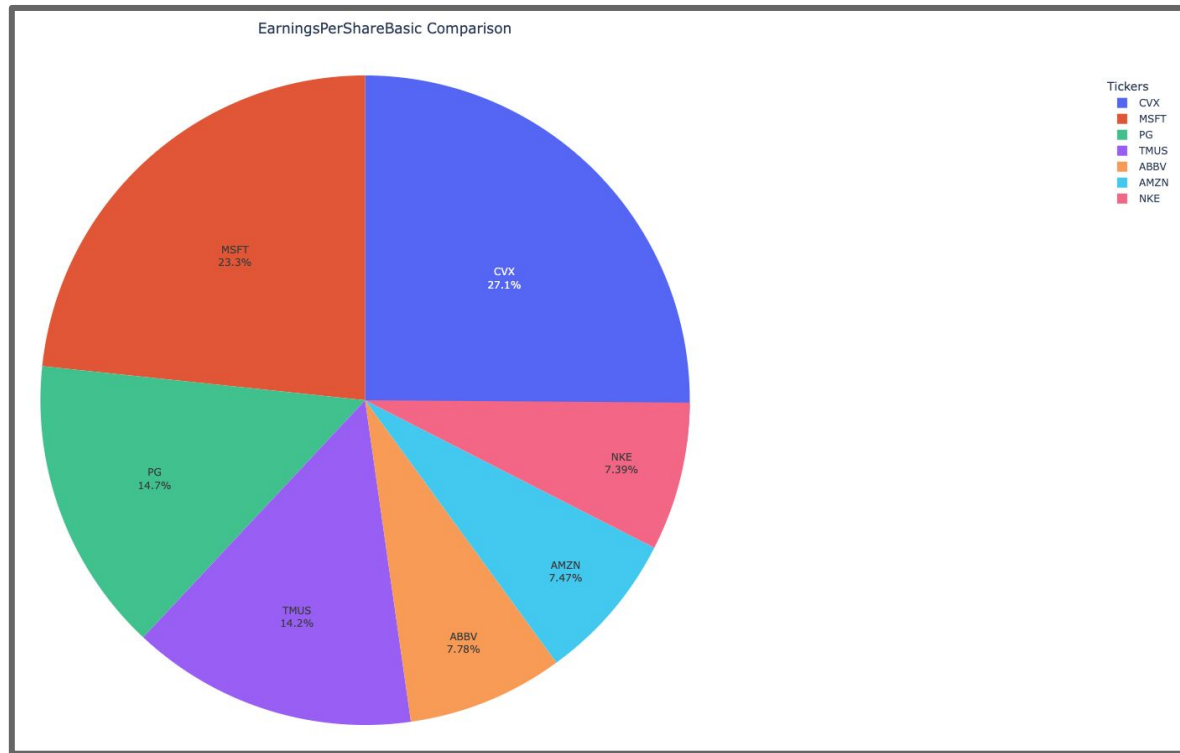


EarningsPerShareBasic Over Time

# Types of Visualizations – Area Graph

```
def areaGraph(self, metric: str, tickers: List[str]) -> None:
```
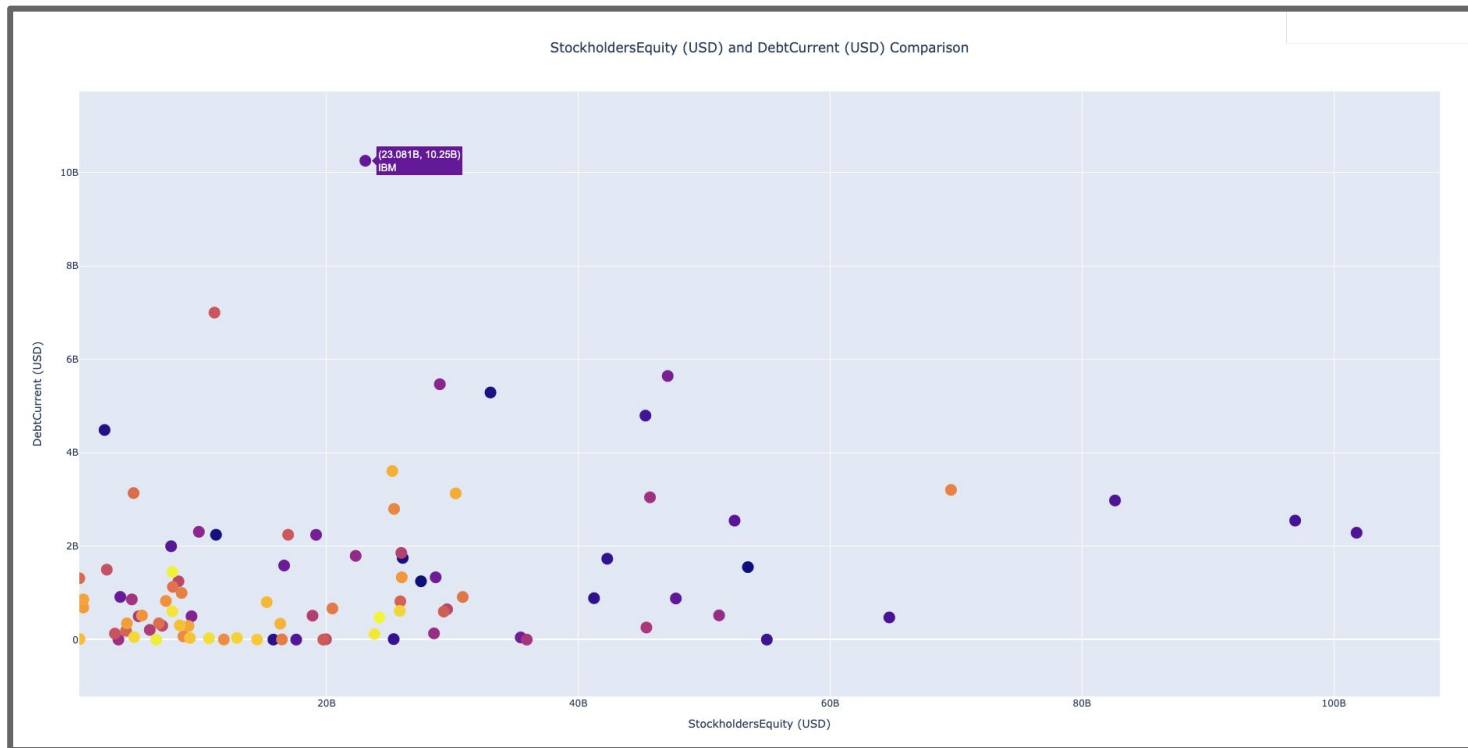
# Types of Visualizations – Pie Chart

```python
def pieChart(self, metric: str, tickers: List[str]) -> None:
```
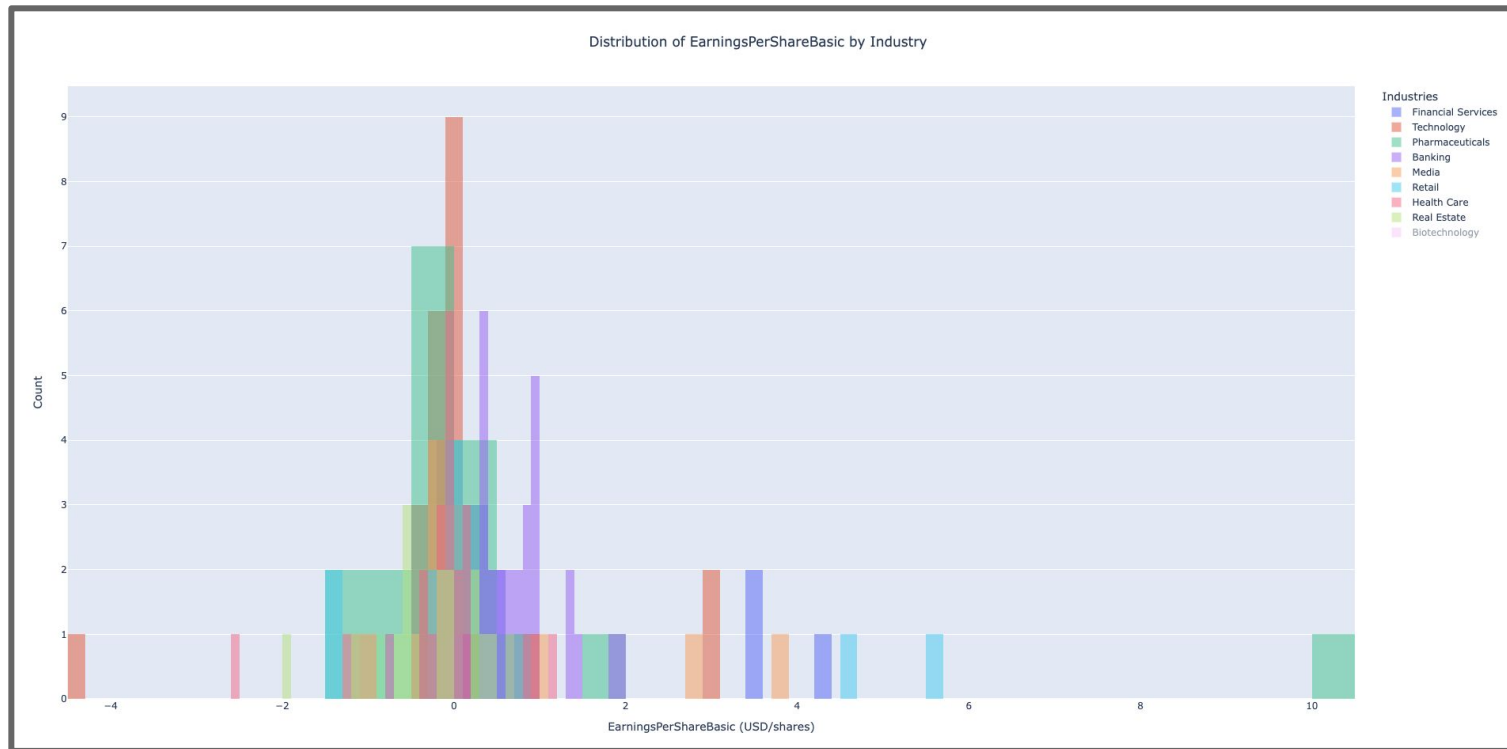
# Types of Visualizations – Scatter Plot

```
def scatterPlot(self, metric1: str, metric2: str, tickers: List[str]) -> None:
```


StockholdersEquity (USD) and DebtCurrent (USD) Comparison

# Types of Visualizations – Overlapping Histograms

```
def overlappingHistogram(self, metric: str, industries: List[str]) -> None:
```

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# Code

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# Future Improvements

1. If SEC database missing data the program skips company entirely

2. Speed bottleneck is SEC & Finnhub API rate limit

3. Improve design aspect (color palettes)

4. Add even more chart options