FINA4350 Group 1 Inverse Cramer with Sentiment Analysis
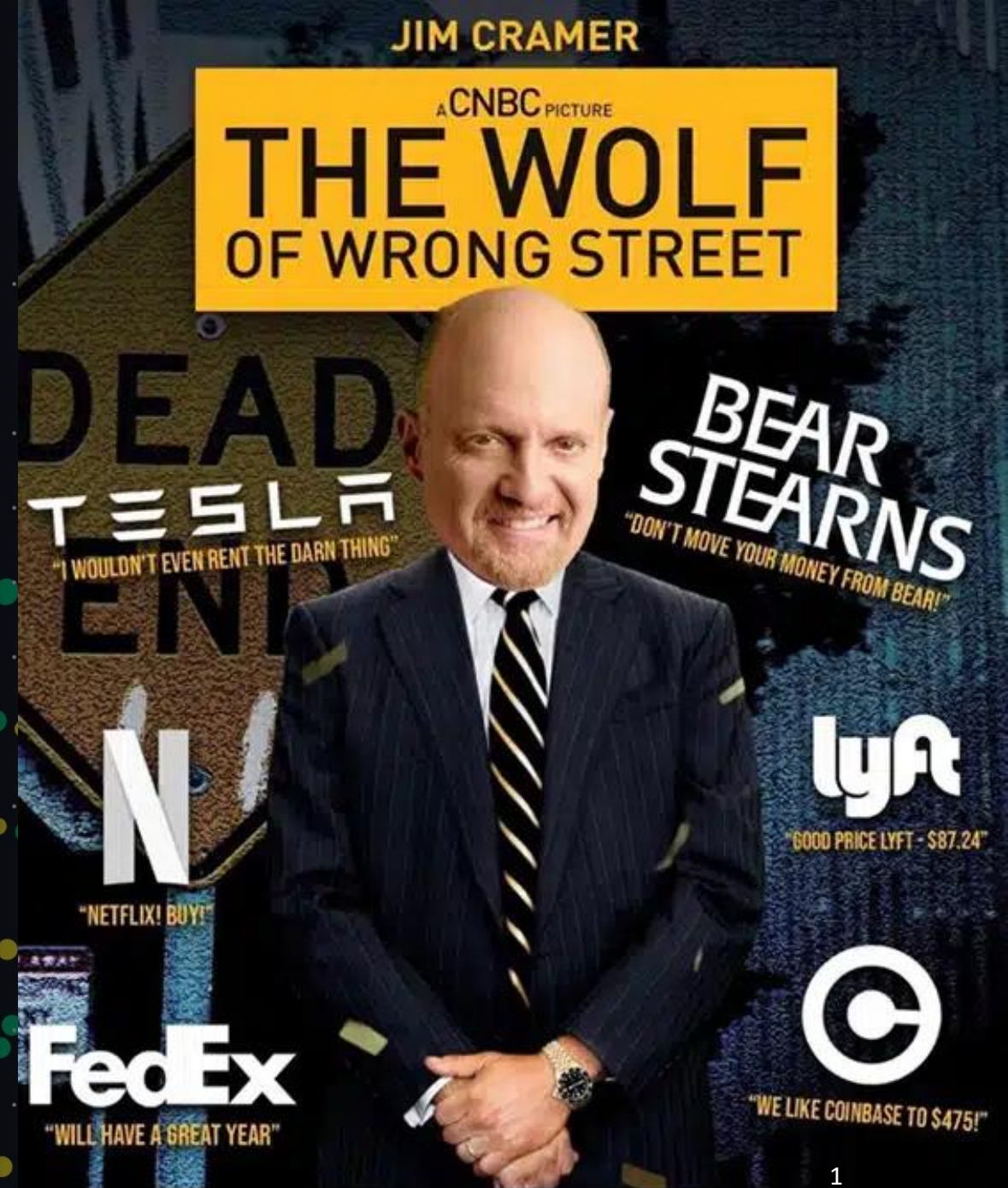
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Jim Cramer

- American television personality, former hedge fund manager

- Host of CNBC's Mad Money.

$TSLA

The Cramer Effect

- whatever Jim Cramer predicts, the opposite happens.
- SeekingAlpha: 20.13% return through the inverse Cramer strategy in 2021.
- The Inverse Cramer ETF: $SJIM outperforms S&P

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Inverse Jim Cramer ETF Outperforms Market Just 2 Weeks After Launch

Goal: Studying the Cramer Effect with NLP

- Study Stock pick and return correlation (1 month, 3 month, 6 month)
- Backtest Inverse Cramer Strategies
- Evaluate the performance of following/inversing Cramer

Jim Cramer ✔ @jimcramer
JP Morgan is a fortress
Mar 10, 2023 · 3:58 PM UTC

💬 7,853   ↻ 1,168   ❞ 5,847   ♥ 7,347

$JPM Sell

Portfolio

	Company	Sym...	...e	Segment	Call	Price
1						
2	AbbVie (ABBV)	ABBV	2021-01-04	D	1	$105.41
3	Advanced Micro Devices (AMD)	AMD	2021-01-04	D	1	$92.30
4	Boeing (BA)	BA	2021-01-04	D	1	$202.72
5	Caterpillar (CAT)	CAT	2021-01-04	D	1	$182.15
6	CVS Health (CVS)	CVS	2021-01-04	D	1	$69.99

Twitter

- Snscrape
  - Web scrapper for social networking sites
  - Use delayed scraping to avoid exceeding the rate limit
    - delay between successive API requests
  - Filter by cashtags

Data Sources: Mad Money Recaps

- Summary of Mad Money episode, every call on every segment.
  - Lightning Round, Game Plan, Sell Block, Am I Diversified?, Mad Mail, and 10 others.

	Company	Symbol	Date	Segment	Call	Price
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Sentiment analysis

BERT

- Training an NLP model requires large amounts of labeled data
  - Expensive
  - time-consuming

- Analyze a word/phrase based on the preceding and following words

- From a scale of 1 (most negative) to 5 (most positive)

Yahoo Finance

- Yahoo Finance API
  - Following 30 / 90 / 180 day return
  - Compare with overall market performance

Peliminary Findings

- Accuracy
  - 30 days return: 40.9%
  - 90 days return: 38.7%
  - 180 days return: 36.6%

- Correlation
  - 30 days return: 0.00231
  - 90 days return: 0.00625
  - 180 days return: -0.00338

Accuracy by sectors

- Highest
  - Communications Equipment
  - Data Processing & Outsourced Services
  - Home Improvement Retail
  - Restaurants

- Lowest
  - Systems Software
  - Interactive Media & Services
  - Integrated Telecommunication Services

"remarC" Strategy Specification

- Framework: QuantConnect

- Jan 2017 - Dec 2021
  - Rebalance weekly
  - an equal-weighted portfolio
  - Start of each month: buy 5 and sell 5
   - Rank = frequency * sentiment

- Experiments
  - (L/S) Long bottom 5 picks, Short top 5 picks
  - (L) Long bottom 5 picks, Short SPY
  - (S) Short top 5 picks, Long SPY

Backtest Performance
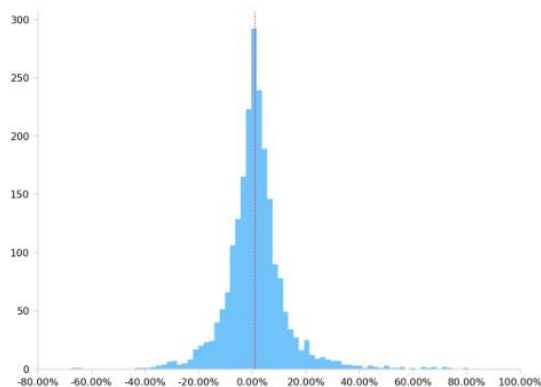
Strategies	Sharpe	CAGR	Drawdown	Net Profit	Win Rate
Cramer follower	-0.484	-8.136%	38.5%	-34.119%	44%
remarC (L/S)	**0.389**	**5.245%**	26.8%	**28.582%**	55%
remarC (L)	0.342	3.792%	31.5%	20.088%	49%
remarC (S)	0.309	2.075%	**10.2%**	10.628%	**57%**

"remarC" Strategies:
- (L/S) Long bottom 5 picks, Short top 5 picks
- (L) Long bottom 5 picks, Short SPY
- (S) Short top 5 picks, Long SPY
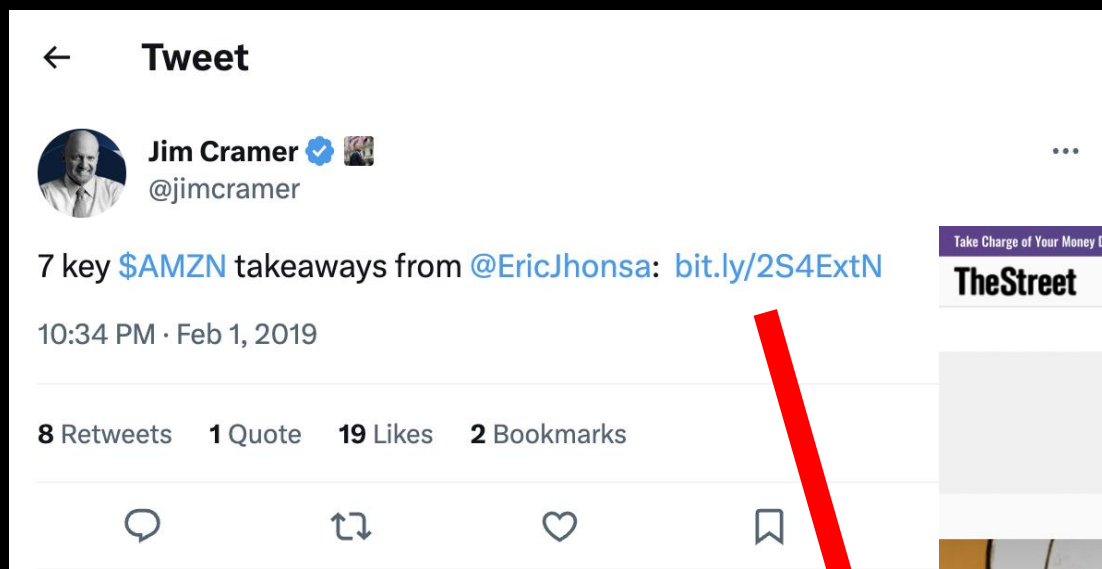
RemarC L/S - Deep Dive
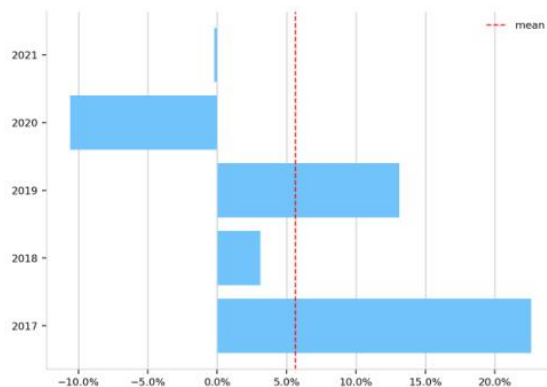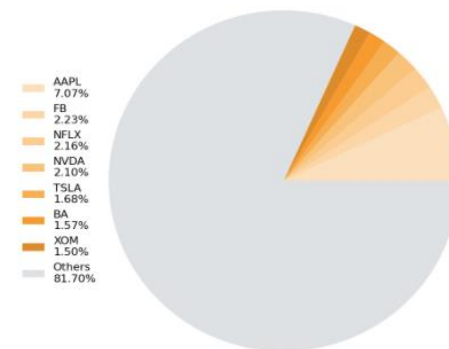
Conclusion

- Inverse Cramer strategies worked best before 2020
- Overall did not outperform the S&P 500 benchmark
- Could be confirmation bias
  - investors seek out opinions and analysis that align with their existing views
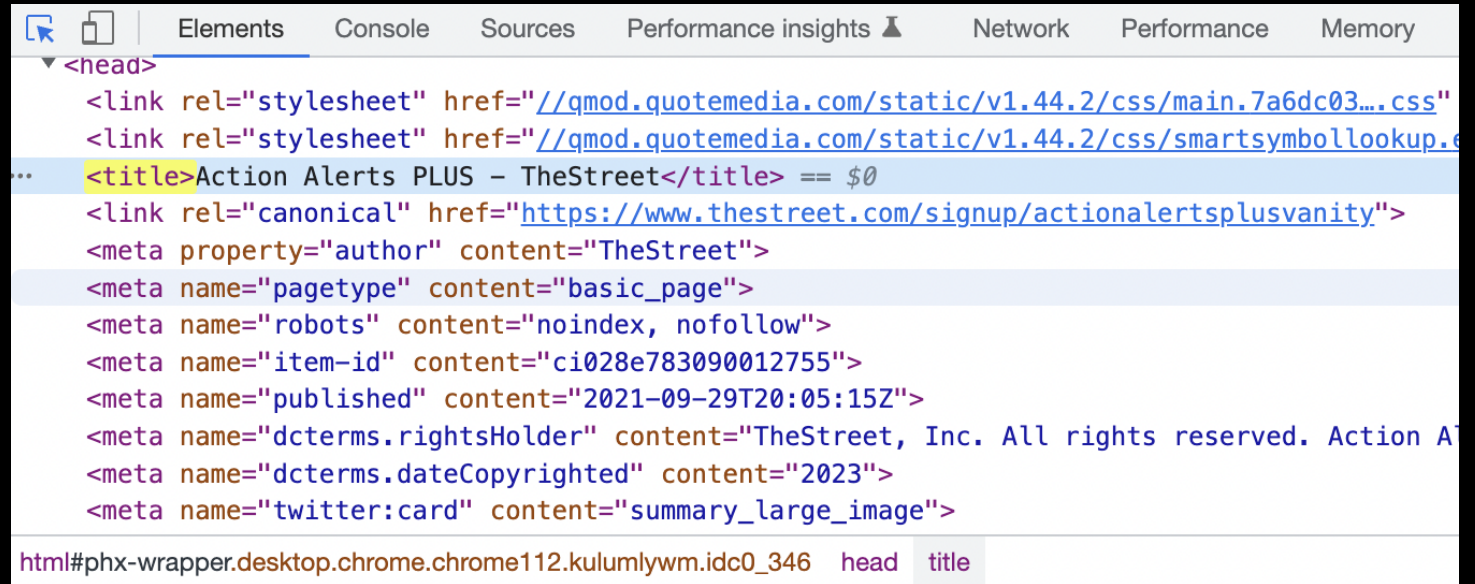 - manifestation of investors' bias (against Cramer)

Future work: Data
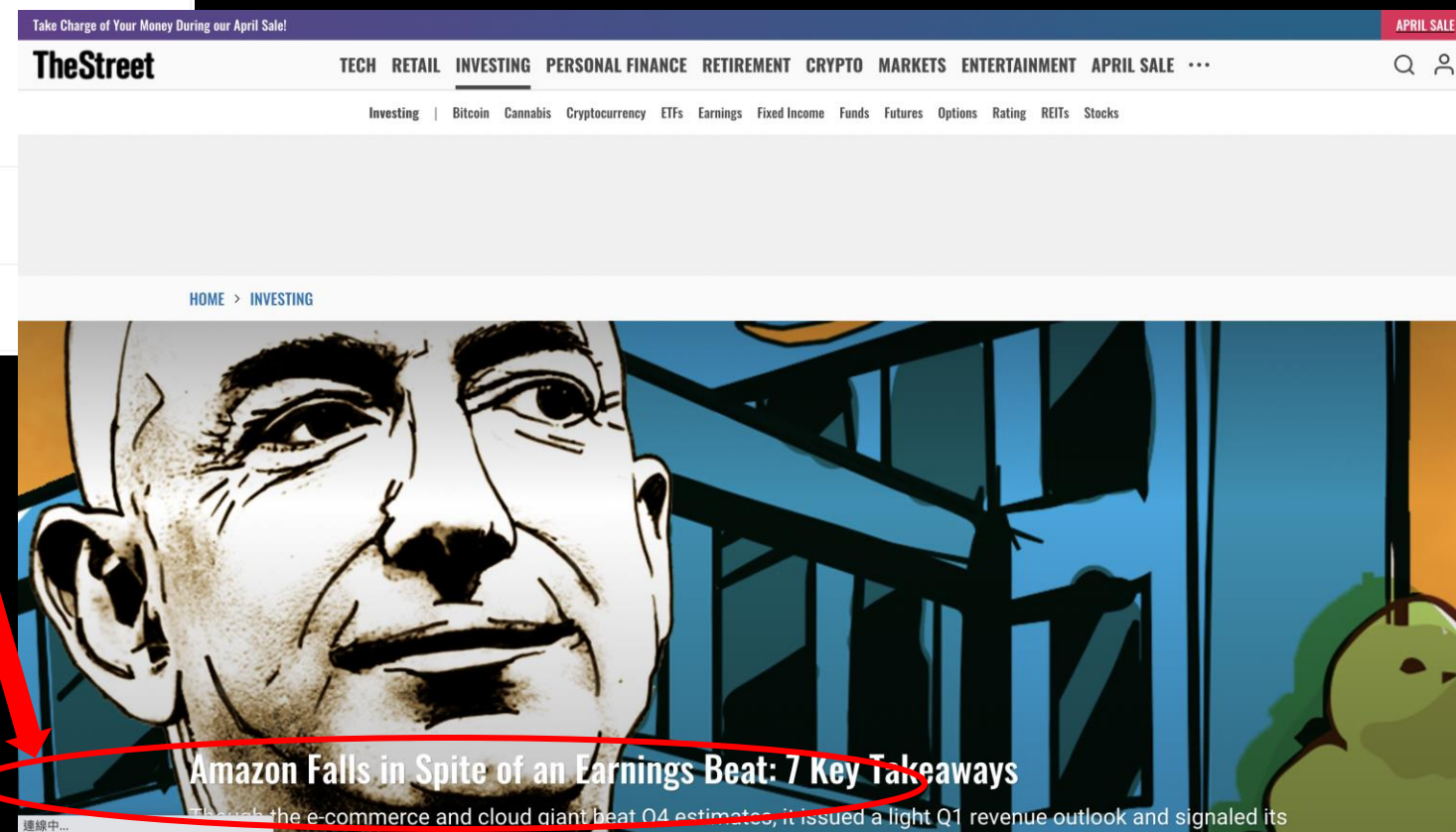
Future work: Data

- Url in tweet
  - Untrainable
  - Get "title" tag after sending request to website
  - BeautifulSoup

Future work: Data Modelling

- Finetune pretrained models to improve accuracy
- NER for company recognition
  - "Micorsoft" -> $MSFT
    - Levenshtein distance

Future work: Strategy improvements

Refine the stock selection criteria

Technicals/Fundamentals

additional risk management techniques

Set drawdown threshold

Alternative portfolio weighting schemes

Sentiment/value weighted

Test different timeframes or with an extended dataset

Rebalancing frequency

References

- MSN - Does the Inverse Jim Cramer Strategy Actually Work?
- https://quantbase.substack.com/p/building-the-inverse-jim-cramer-index