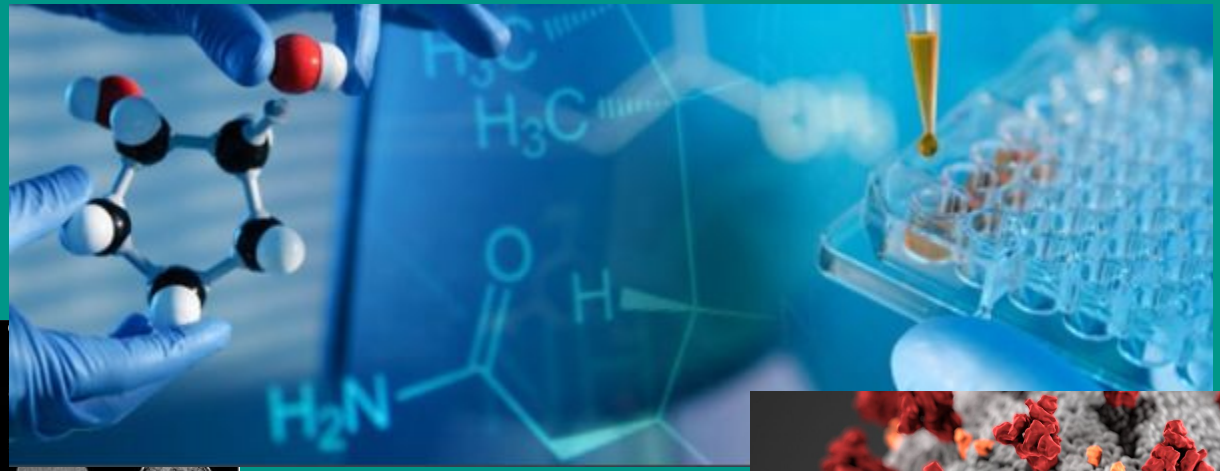
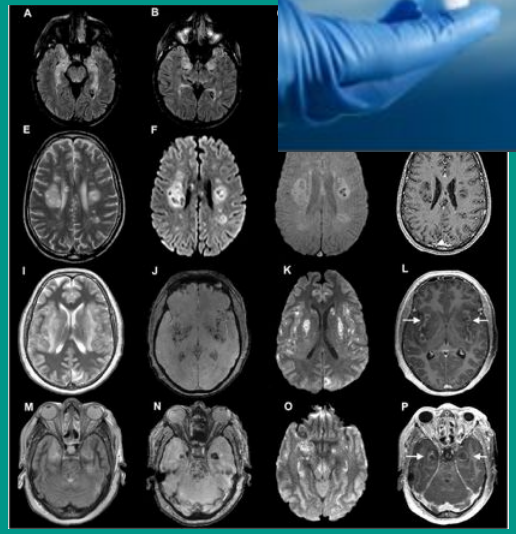
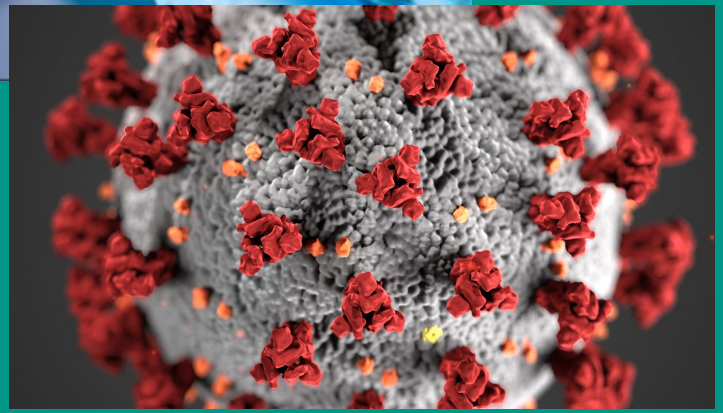
Sentiment Analysis of Pharma Company Press Releases

Amy Sillman
Metis Data Science Bootcamp
March 24, 2021

Motivation







Press Releases

- **Lilly and Nektar Therapeutics Announce Alliance to Develop and Commercialize NKTR-358, A Novel Autoimmune Therapy**

  INDIANAPOLIS and SAN FRANCISCO, July 24, 2017 /PRNewswire/ -- Eli Lilly and Company (NYSE: LLY) and Nektar Therapeutics (NASDAQ: NKTR) have announced a strategic collaboration to co-develop NKTR-358, a novel immunological therapy discovered by Nektar. NKTR-358, which achieved first human dose in Phase 1 clinical development in March of 2017, has the potential to treat a number of autoimmune and other chronic inflammatory conditions.

  NKTR-358 is a potential first-in-class resolution therapeutic that may address an underlying immune system imbalance in patients with many autoimmune conditions. It targets the interleukin (IL-2) receptor complex in the body in order to stimulate proliferation of powerful inhibitory immune cells known as regulatory T cells. By activating these cells, NKTR-358 may act to bring the immune system back into balance. This could lead to a profound clinical impact and healthy organ function in autoimmune conditions.

  "We look forward to working with Nektar to study this novel approach to treating a number of autoimmune conditions," said Thomas F. Bumol, Ph.D., Senior Vice President of Biotechnology and Immunology Research at Lilly. "NKTR-358 is an exciting addition to our immunology portfolio and reinforces Lilly's commitment to sustain a flow of innovative medicines in our pipeline."

Press Release Text Data Processing

Data Collection Preprocessing

- Scrape PRs
- EOD Prices

- Cleaning
- Tokenize
- Stop Words

Text Analysis

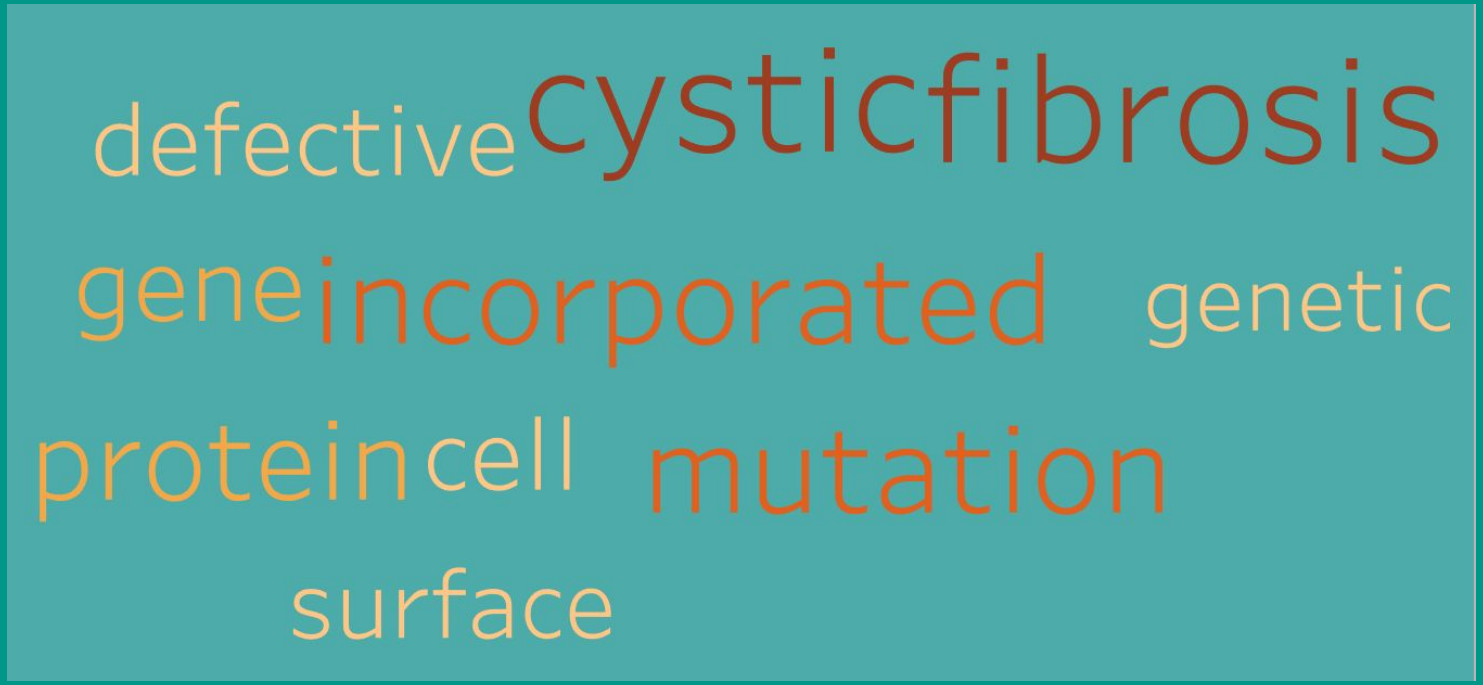
- Vectorize
- Topic Modeling
- Sentiment Analysis

Topic Modeling

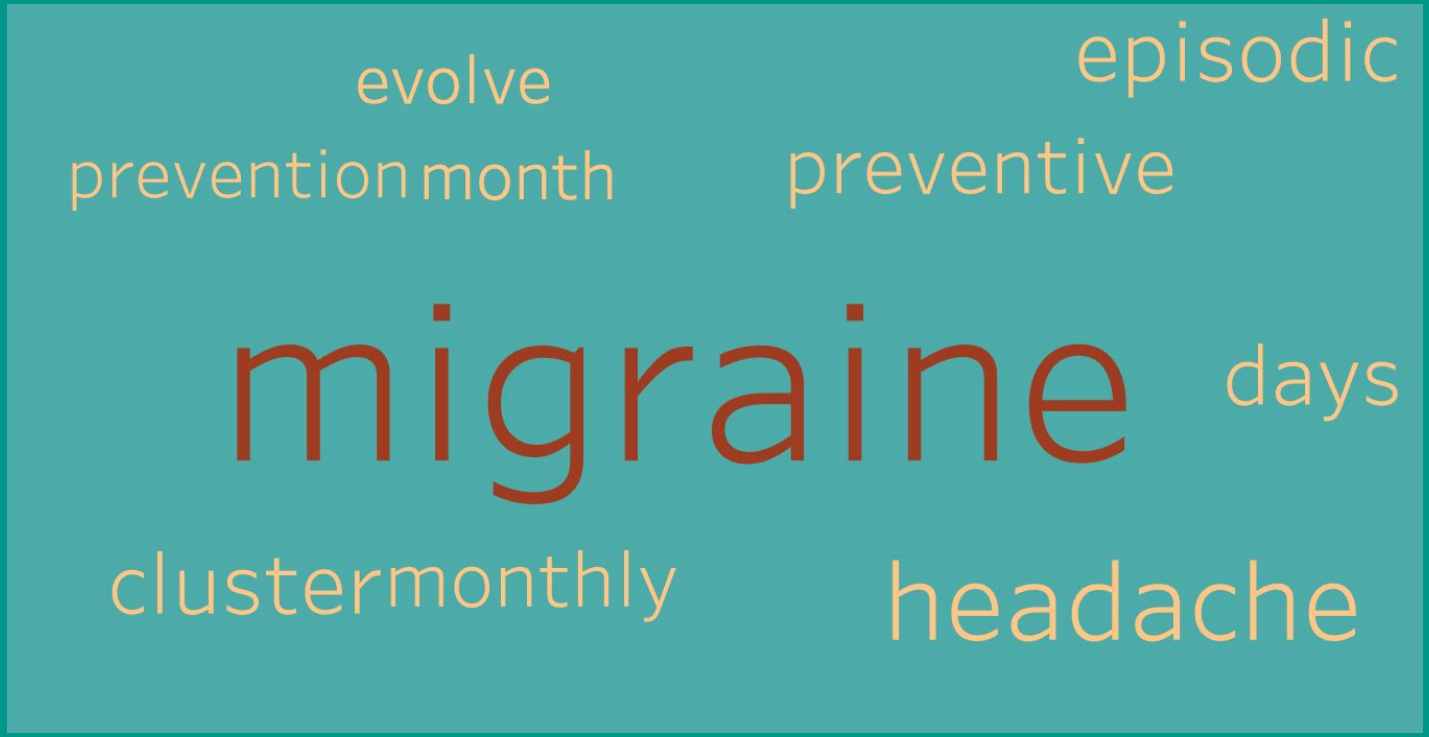
Topic: Oncology

Topic: Diabetes

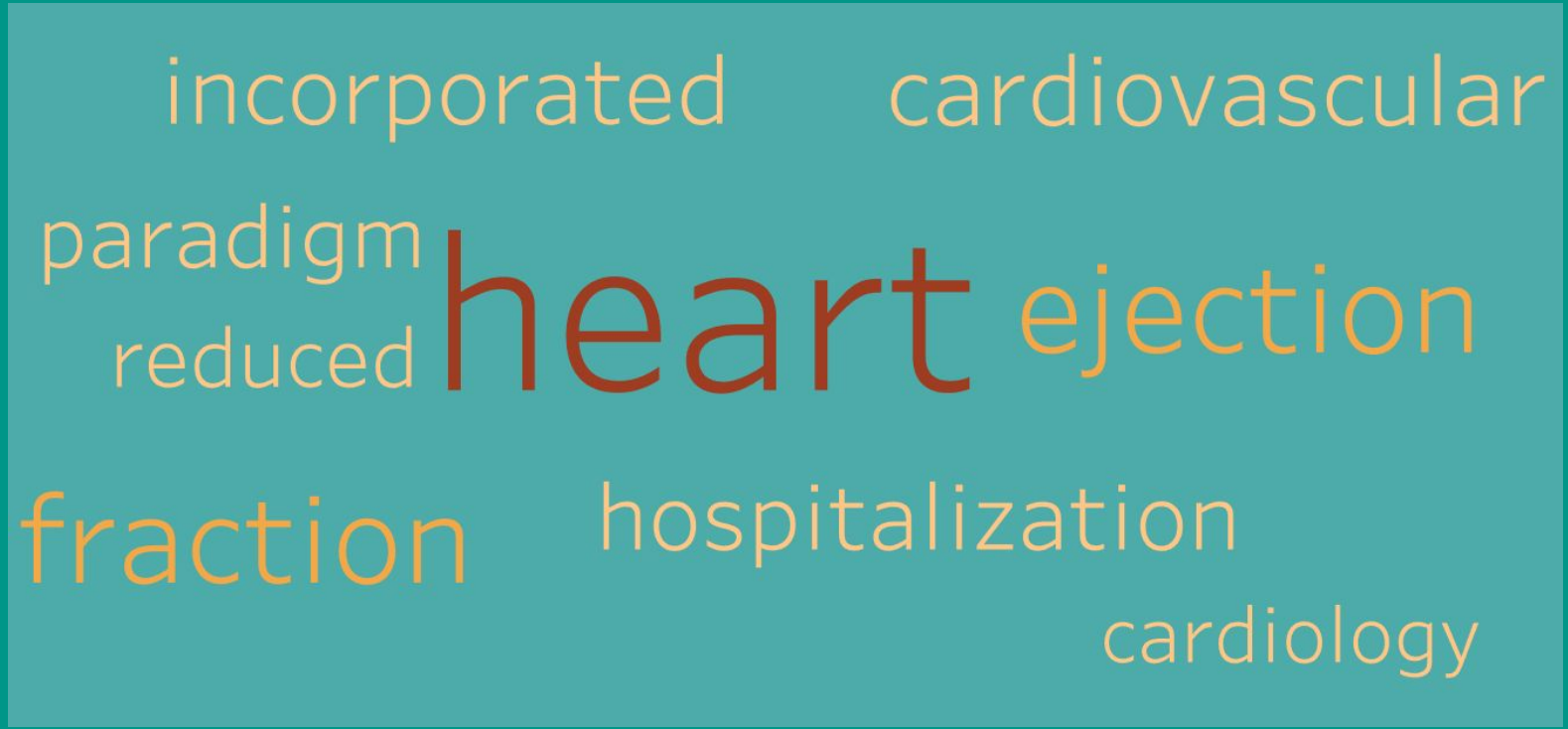
Topic: Cystic Fibrosis



Topic: Migraine



Topic: Cardiovascular Disease



Topic: Investing

Topic: Financial Operations

Sentiment Analysis

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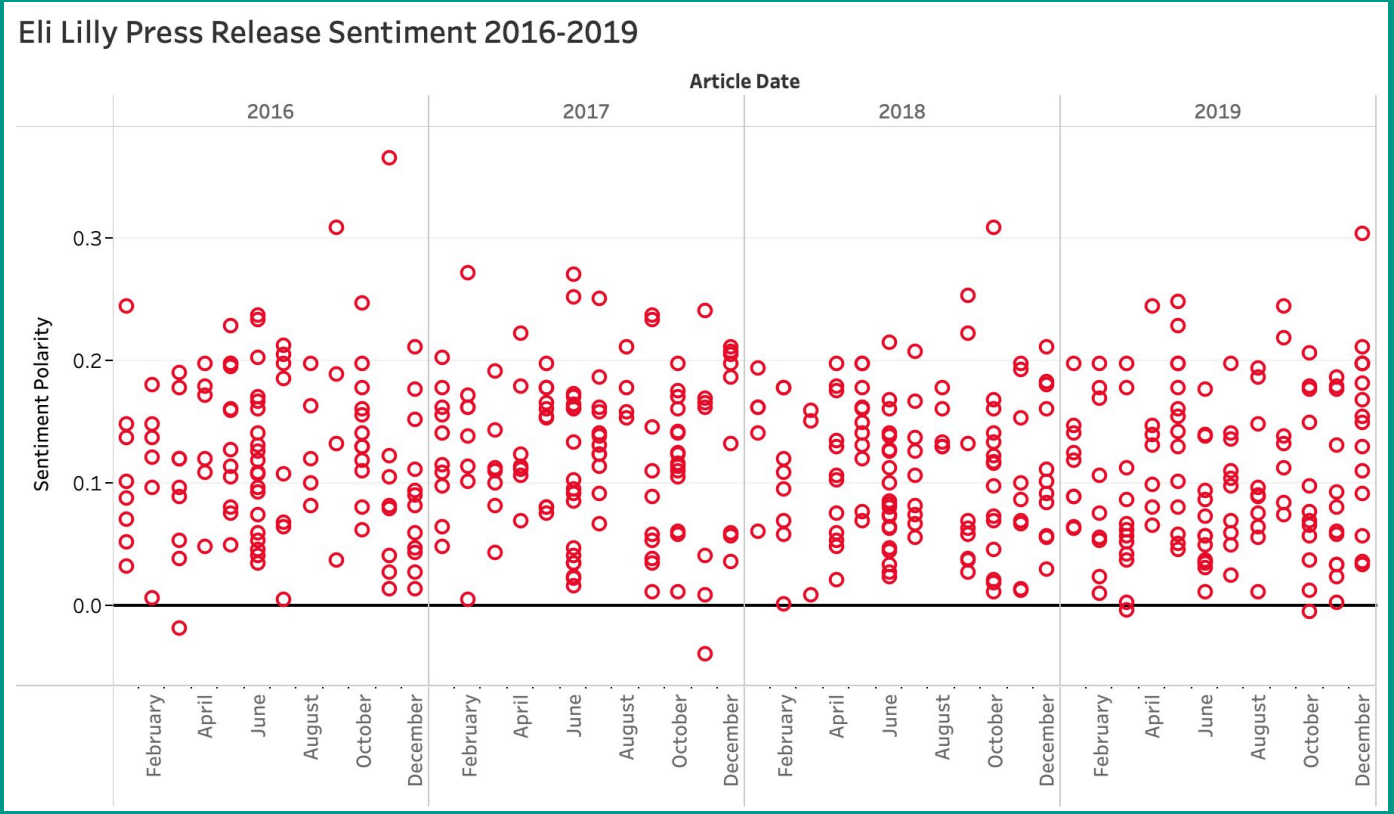

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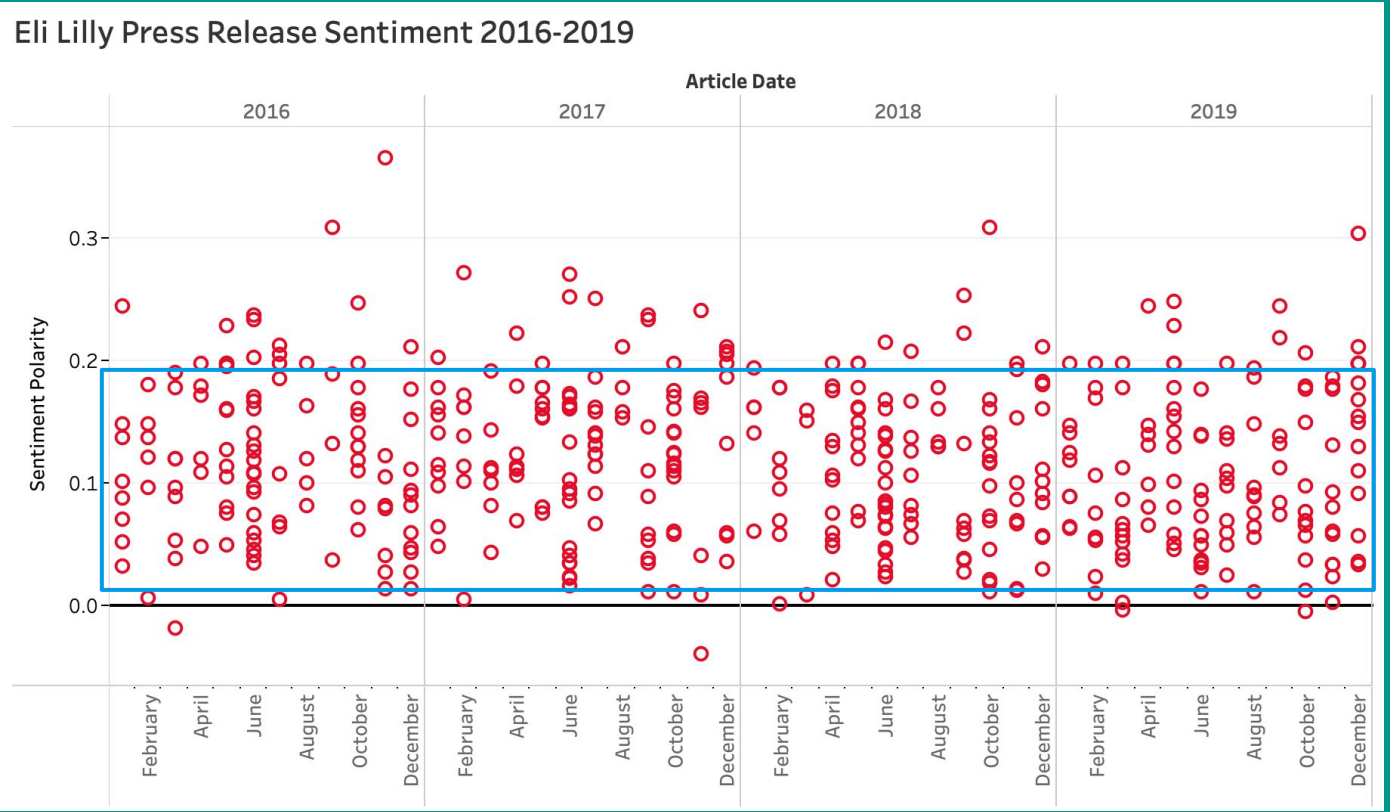

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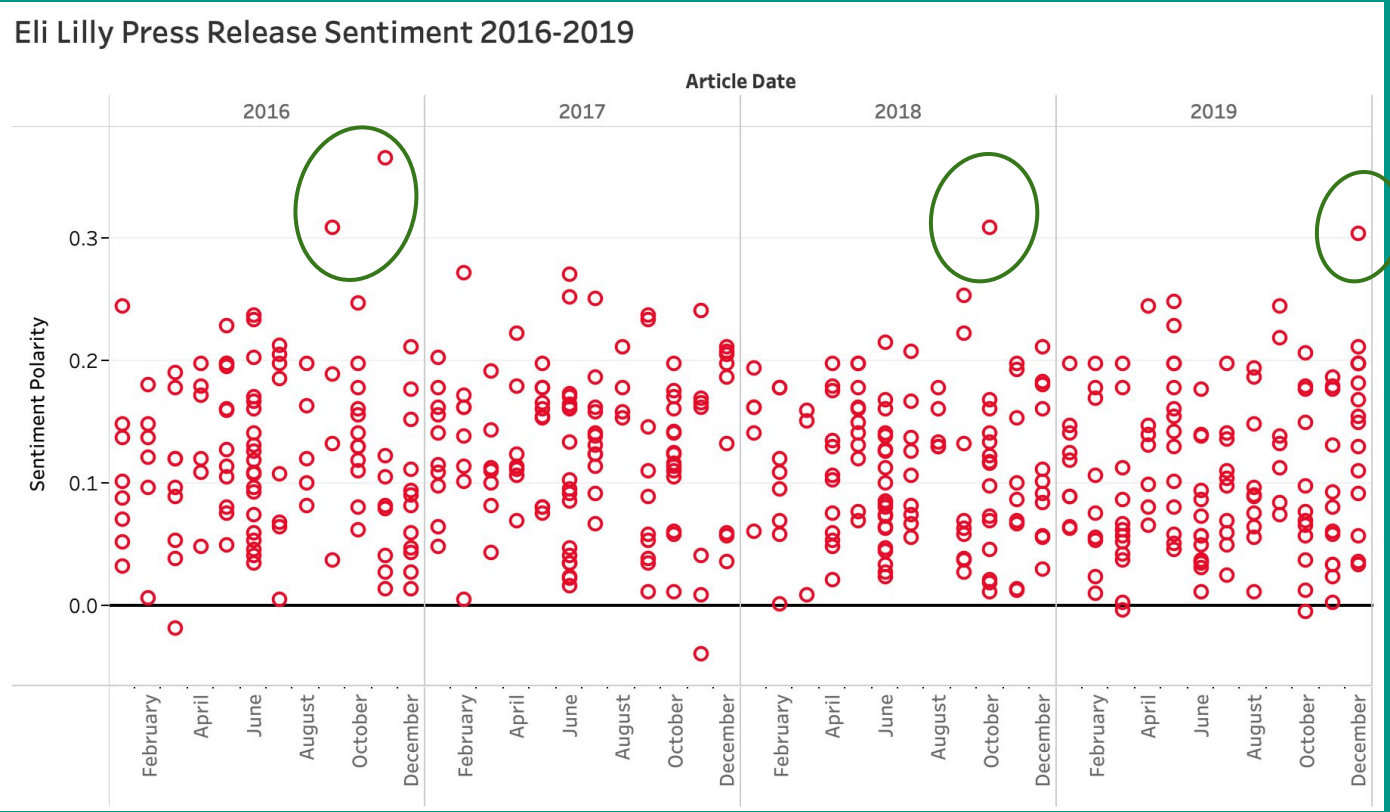

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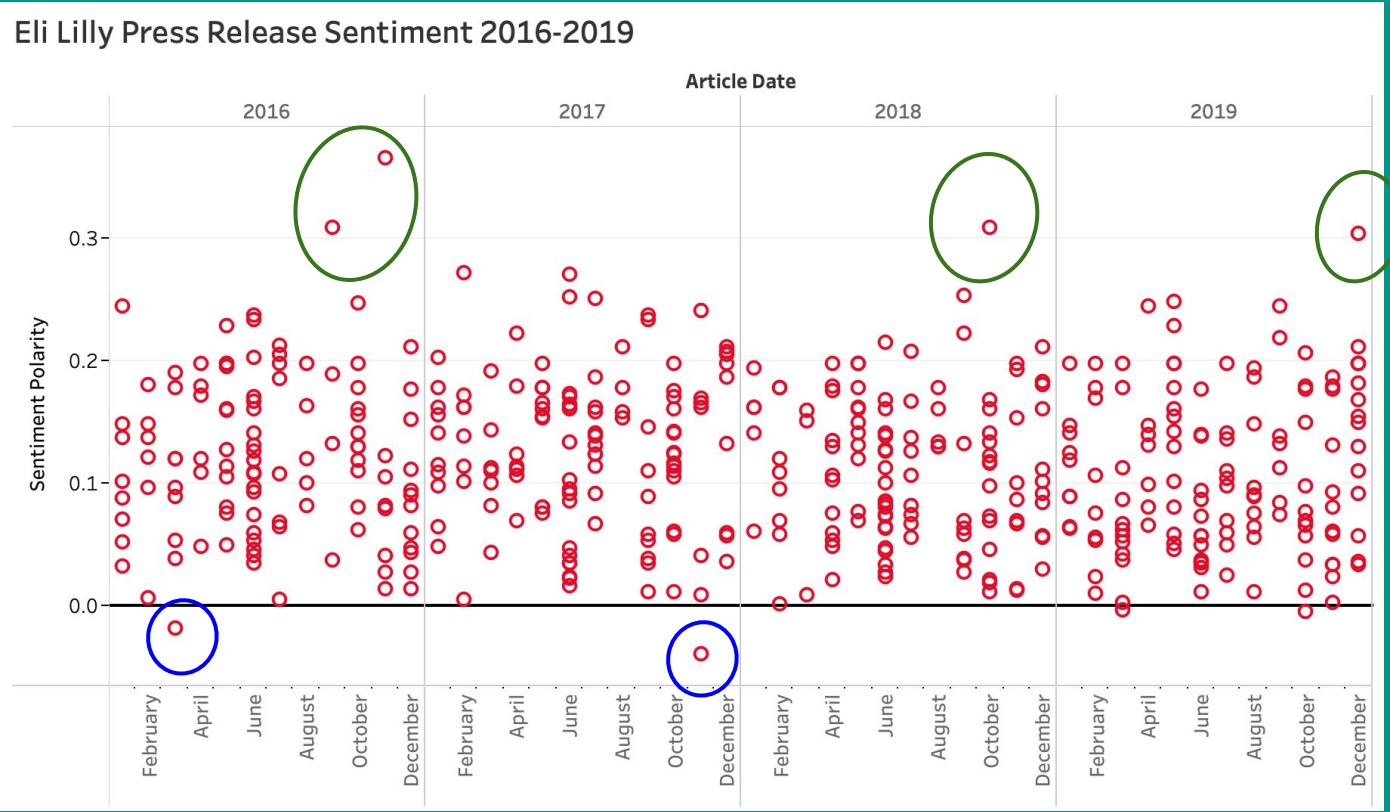

Sentiment Analysis: Positive

Lilly Introduces Scholars Programs for Florida A&M University's and Howard University's Business Students

INDIANAPOLIS, Nov. 30, 2016 /PRNewswire/ -- Eli Lilly and Company (NYSE:LLY) will deepen its partnership with Florida Agricultural and Mechanical University (FAMU) and Howard University with the inaugural Sybil C. Mobley Scholars Program and the inaugural H. Naylor Fitzhugh Scholars Program. The programs, in part, aim to increase the representation of diverse talent in Lilly's marketing organization.

For many years, Lilly has partnered with Howard University as a corporate sponsor of Howard University's 21 Century Advantage Program (CAP), a program in which Fortune 500 companies adopt teams of freshmen and

0.3658

Boston Mayor Walsh and the Alzheimer's Association, Massachusetts/New Hampshire Chapter, Receive Alzheimer's Readiness Award

BOSTON, Sept. 15, 2016 /PRNewswire/ -- Boston Mayor Martin J. Walsh and the Alzheimer's Association, Massachusetts/New Hampshire Chapter were recognized today for their efforts to ensure the city of Boston is prepared for the fiscal and social impact of Alzheimer's disease.

The Alzheimer's Readiness Award was presented to Mayor Walsh and James Wessler, CEO of the Massachusetts/New Hampshire Chapter of the Alzheimer's Association, on behalf of the Alzheimer's Readiness Project, an initiative of Eli Lilly and Company (NYSE: LLY) committed to inspiring action by fostering a deeper

0.3089

Lilly Names HealthVoyager as Winner of Digital Health Innovation Challenge for Inflammatory Bowel Disease (IBD)

INDIANAPOLIS, Dec. 2, 2019 /PRNewswire/ -- Eli Lilly and Company's (NYSE: LLY) first digital health open innovation challenge, "Transforming IBD Care: Better Disease Monitoring, Management, and Care for People with Inflammatory Bowel Disease," has concluded, with HealthVoyager, an application developed by Boston Children's Hospital and Klick Health, being named the winner. The idea leverages a highly customizable

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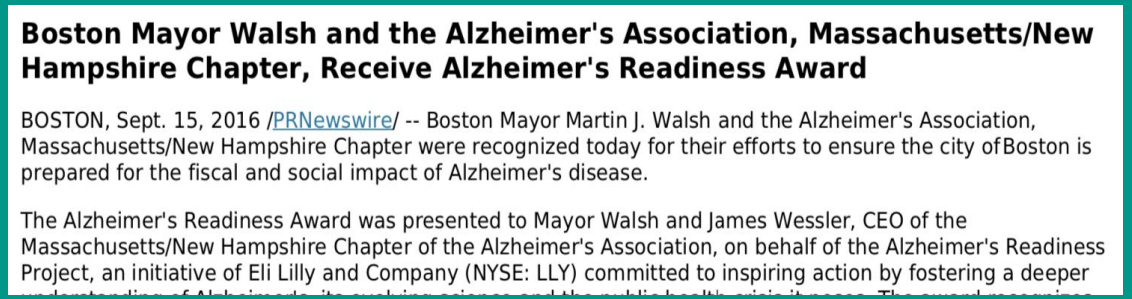

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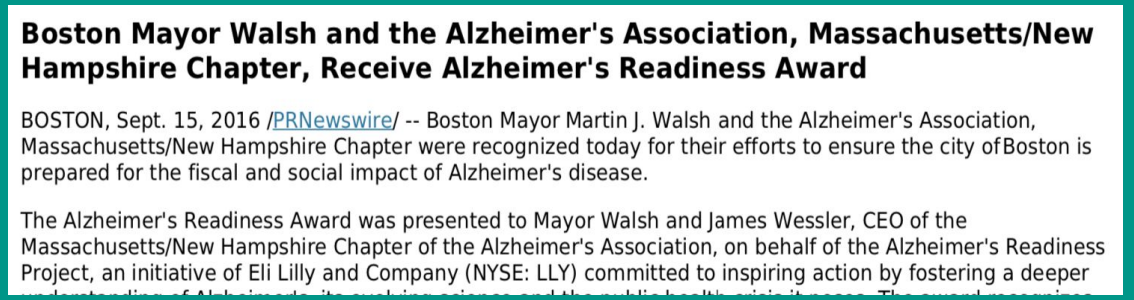

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Lilly to Present Phase 3 Data at the American Academy of Dermatology (AAD) Annual Meeting for Ixekizumab in Psoriasis and Psoriatic Arthritis

- 29 abstracts will highlight new data for ixekizumab, including 60-week safety and efficacy results in moderate-to-severe plaque psoriasis -

INDIANAPOLIS, March 1, 2016 /PRNewswire/ -- Eli Lilly and Company (NYSE: LLY) will showcase results from pivotal Phase 3 data investigating ixekizumab for the treatment of moderate-to-severe plaque psoriasis and active psoriatic arthritis at the 74th annual meeting of the American Academy of Dermatology (AAD), which will take place March 4-8, 2016, in Washington, D.C.

-0.0185

ACR/ARHP 2017: Long-Term Use of Lilly's Taltz® (ixekizumab) Shows Efficacy Improvements in Psoriatic Arthritis for Patients with Prior Inadequate Response or Intolerance to TNF Inhibitors

Taltz also demonstrated improvements in key secondary measures, including skin clearance, at 52 weeks

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  - Highly specialized vocabulary should be tuned
  - Context is important!

“Cancer” “Disease” “Headache”

Thank You!

Amy Sillman, Ph. D.
San Francisco, CA
sillman03@gmail.com
https://www.linkedin.com/in/amysillman/
https://github.com/sutrofog

Sentiment Analysis: Less Positive

Lilly and Nektar Therapeutics Announce Alliance to Develop and Commercialize NKTR-358, A Novel Autoimmune Therapy

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0.1864

Lilly and Incyte Provide Update on Baricitinib

INDIANAPOLIS, July 25, 2017 /PRNewswire/ -- Eli Lilly and Company (NYSE: LLY) and Incyte Corporation (NASDAQ: INCY) announced today that a resubmission to the U.S. Food and Drug Administration (FDA) for the New Drug Application (NDA) for baricitinib, a once-daily oral medication for the treatment of moderate-to-severe rheumatoid arthritis (RA), will be delayed beyond 2017. The companies will be further discussing the path forward with the agency and evaluating options for resubmission, including the potential for an additional clinical study, as requested by the FDA. The length of time to a resubmission for the NDA will depend on which option the companies pursue and further FDA discussions, but is anticipated to be a minimum of 18 months.

"We disagree with the FDA's conclusions, and believe the existing comprehensive clinical data demonstrate there is a positive benefit/risk profile that supports baricitinib's approval as a new treatment option for people suffering from RA in the United States," said Christi Shaw, president of Lilly Bio-Medicines. "We are disappointed that resubmission will not occur this year, but are committed to bringing baricitinib to people with RA and we will work with the FDA on the path forward."

0.1144

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$75.56 → $76.39