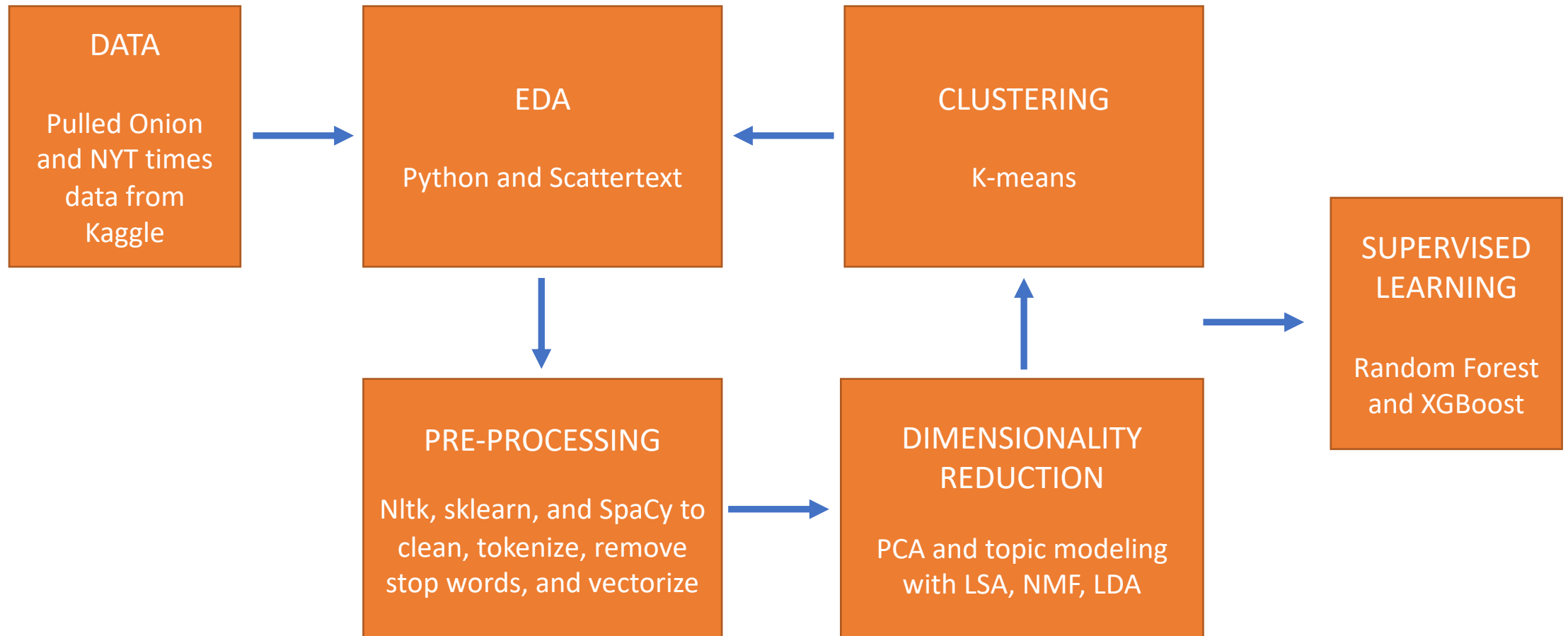


# New York Times vs The Onion

- Motivation:
- With the current climate of “fake” news and strange news, it’s important to be able to distinguish actual news stories from other types like satire.
- Objectives:
- Can we build a model that can distinguish between a New York Times article and an Onion article?

# NLP Workflow

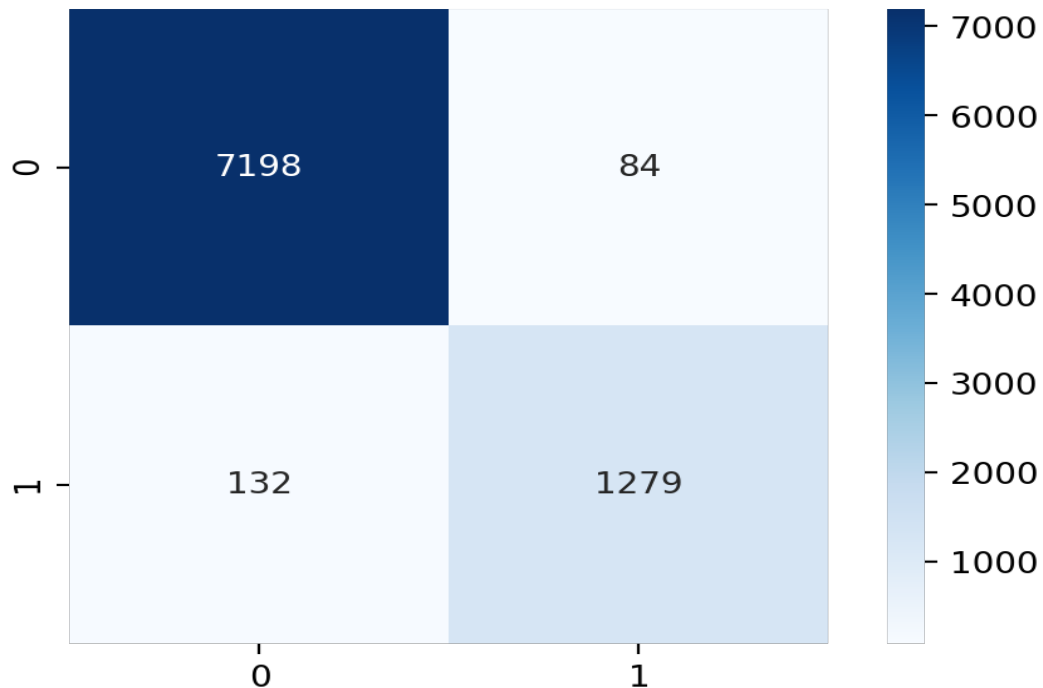


# Data

Onion ▼	Title ▼	Content ▼
1	Sixth-Grader's Family Tree Fails To Hold Up To Scrutiny	Sixth-grader Adam Jones' family tree, assigned recently as homework, fails to hold up to scrutiny, social-studies teacher Gwen Wexler reported Monday. "I'm a
1	Amtrak Passengers Treated To Whirlwind Tour of Poor People's Yard	Amtrak passengers traveling on the "Heartland Express" through Illinois were treated to a special sight Monday: mile after mile of yards belonging to low-income
1	Heimlich Demands Maneuver Royalties	Lawyers for Dr. Henry Heimlich, inventor of the Heimlich maneuver, warned Monday that the doctor will sue anyone who performs his patented procedure with
1	Taco Bell Employee Somehow Dressed Down By Manager	Improbably, Taco Bell employee Wayne Lorimer, 28, was dressed down by manager Cal Dyer Tuesday. "I thought I was already cut down to size just by worki
1	Woman With Shitty Job Her Own Boss	Cynthia Rimler, self-employed for the past three months as a sales representative for RoyalAire Cosmetics, sets her own hours and answers to no one regardin
1	History Teacher Has Unusual Favorite President	Paul Loftus, an 11th-grade history teacher at Grovedale High School, proudly touts his unconventional choice for favorite U.S. president, Calvin Coolidge. "Peopl
1	Poke With Stick Confirms Raccoon's Death	Upon arriving on the scene of a possible raccoon fatality, brothers Jason Everson, 11, and Tyler Everson, 9, were able to positively confirm the small rodent's de
0	U.S. promises not to imprison Julian Assange under harsh conditions	If a British court permits the extradition of the WikiLeaks founder Julian Assange to face criminal charges in the United States, the Biden administration has pl
0	Israel's Groundhog Day: A fourth election in two years.	Israelis went to the polls on Tuesday for the fourth time in two years, hoping to end a political deadlock that has left the country without a national budget or :
1	Purchase Justified By Theoretical \$50 Rebate	The theoretical possibility of receiving a \$50 mail-in rebate motivated shopper Jim Crewes, 28, to purchase a color printer Monday. "I really can't afford to be b
0	U.K. Justice System Has Failed Rape Victims, Government Says	Thousands of rape and sexual assault victims have been failed by the criminal justice system, according to a British government review released Friday that cit
0	Statement Dressing in a Red Carpet Kurta	A kurta by any other name is just as dope," the British-Pakistani actor-musician Riz Ahmed said last week, speaking from his home base in London.
0	A Midsummer Night's Dream Sprinkled With High-Tech Fairy Dust	A Midsummer Night's Dream may be one of Shakespeare's most performed plays but its latest version from the Royal Shakespeare Company will be unlike ar
0	Five New Horror Movies to Stream Now	A Quiet Place Part II and Spiral: From the Book of Saw, are hogging the horror movie spotlight in theaters at the moment. But on streaming, these five under-th
0	Taylor Swift's All Too Well and the Weaponization of Memory	A record label didn't pick this song as a single, Taylor Swift told an enraptured audience Friday afternoon in Manhattan, where a few hundred fans assembled f
0	A Soldier's Play wins for best revival of a play.	A Soldier's Play, Charles Fuller's Pulitzer Prize-winning 1981 drama about racism in the American military, won the Tony Award for best revival of a play.

# PCA and Random Forest

Accuracy	Precision	Recall	F1
97.5%	93.8%	90.6%	92.2%



## False Negatives Examples:

**Radical Islamic Extremists Snowboard Into U.S. Embassy**  
Extremist board-trick crew Al-J'Aqasse, the Middle East's most prominent Islamic radical snowboard posse, is taking full props for destroying the American embassy when a member nailed a goofyfoot 720 nosehook from a security-barrier railgrind into its offices while carrying 25 kilos of C4 plastic.

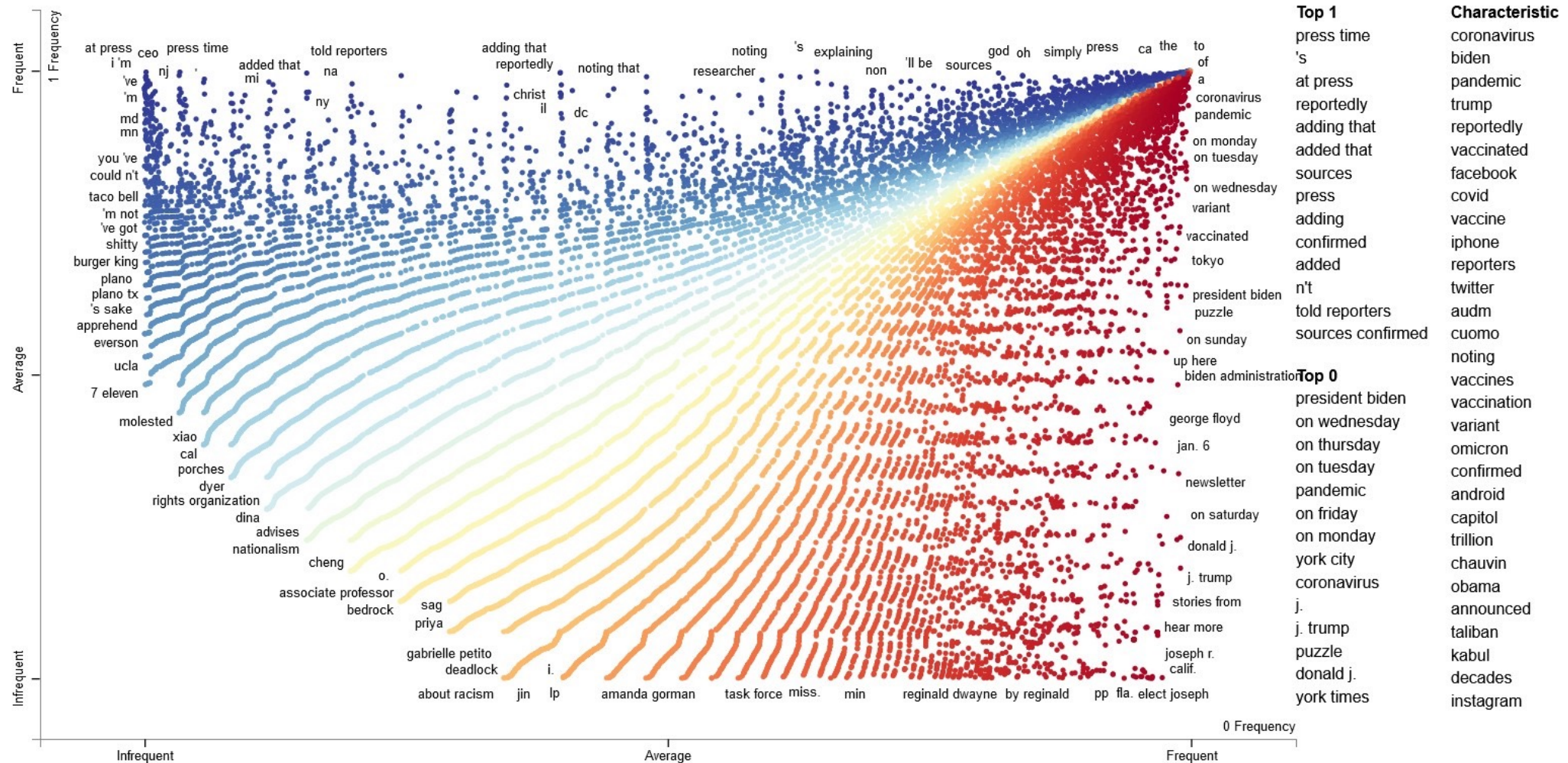
## Earth Explodes

In a move astronomers are calling ,surprising, the planet earth violently exploded yesterday, shattering into billions of tiny fragments and killing all life existing on it. ,From all indications, the planet just spontaneously combusted, said James Frye of Stanford, Palomar Observatory. We'll know more after we examine soil samples.

## The Onion Wins Nobel Prize

American newspaper The Onion received a Nobel Prize this week in the category of Overall Excellence. The award, which marks the 12th time The Onion has been honored as a Nobel laureate, was presented in recognition of what the prize committee called "The Onion's massive and enduring contribution to overall excellence in all fields"

# Scatter Text



# Conclusions and Next Steps

- Definitely possible to use NLP to get good results but false negatives can cause issues
- Pursue using n-grams instead of single words based on analysis of the scatter text chart.
- Try out additional clustering methods and algorithm tuning.