Misinformation in Media

PDI Symposium Spring '23

NewsGuard Update

Diagnosis
Report on effect of fake news on elderly

Curriculum
Drafted digital literacy lesson plans

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Infographic
Visual guide aiding users to avoid misinfo

In practice
UK gov & non profit run focus groups
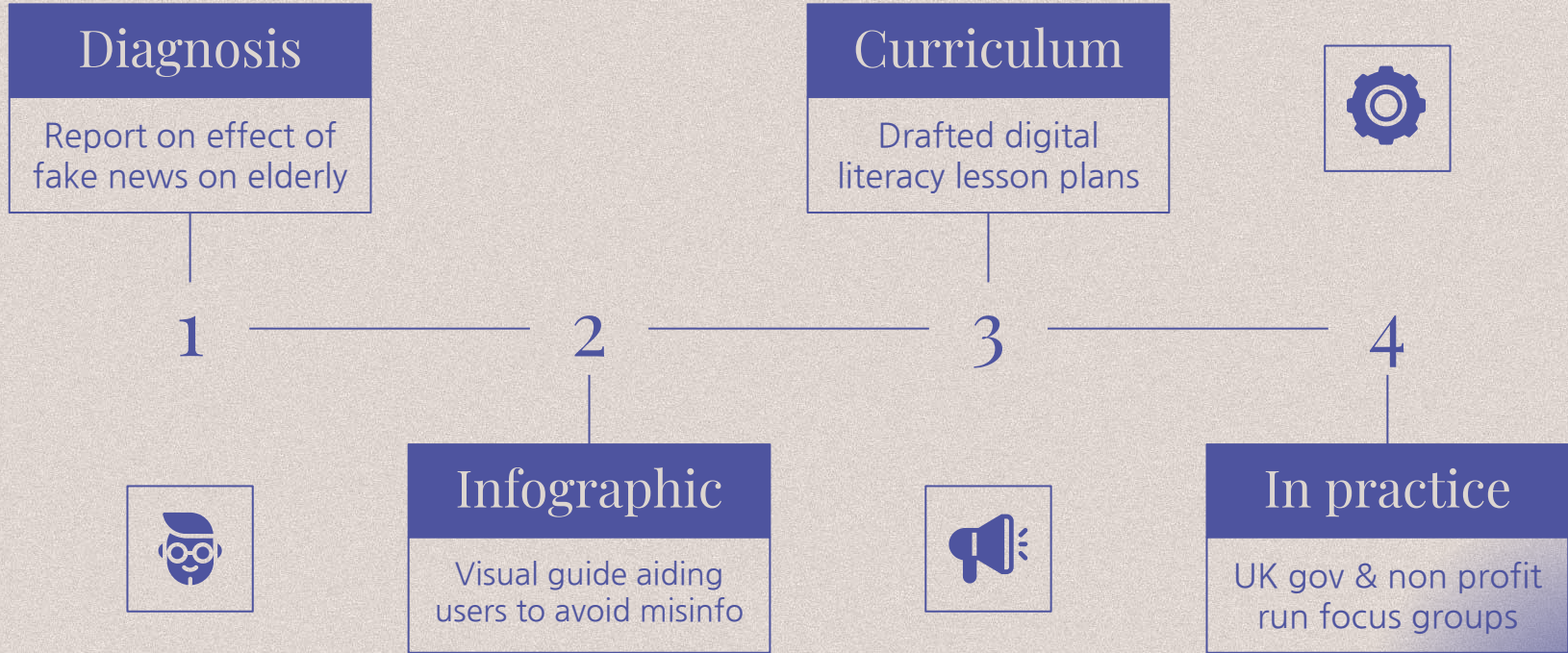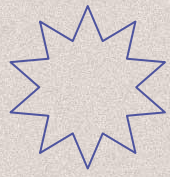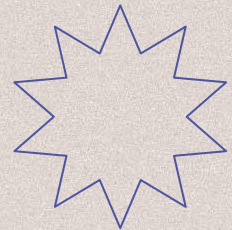
Two initiatives

Policy Proposal

Document the state of existing 'fake news' regulation. Recommend public and private policy changes.

Data Analysis

Analyze fake and real news articles for linguistic markers. Identify sentiments associated with misinformation.
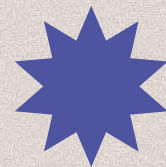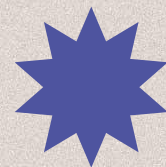
01

Policy Proposal

Regulating fake news while protecting free speech

The Status Quo

The Public
- 32% of Americans trust the media
- 67% of Americans are regularly exposed to fake news
- Linked to ethnic violence, election tampering, rise in fraudulent health remedies

Corporations
- Independent measures misinformation regulation
- Algorithms continue to push misinformation
- Social media platforms profit off of misinformation

Government
- Make digital platforms a public utility like electricity, gas or water
- Fund public media stations to counteract misinformation
- EU Digital Markets Act

Policy Recommendations

Government Policy Recommendations:
- Section 230 reform - make internet platforms liable for user actions
- Bipartisan Transparency Regulations -
- Selective Franchising Grants by Local Authorities

Corporation Recommendations:
- Address platform algorithms, verification, and content review systems
- Advertisement and Ad Revenue Streams

Public Recommendations:
- Cognitive heuristics versus critical thinking
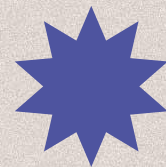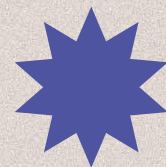- Expand digital literacy access in schools and online courses

02

Data Analysis

Using feeling to identify falsity

Methods

Dataset
- Dataset with 80k news articles, 50% fake, 50% real.
- Aggregated and labeled by the EU since 2015

Question: can we distinguish real and fake news via article length or emotional content?
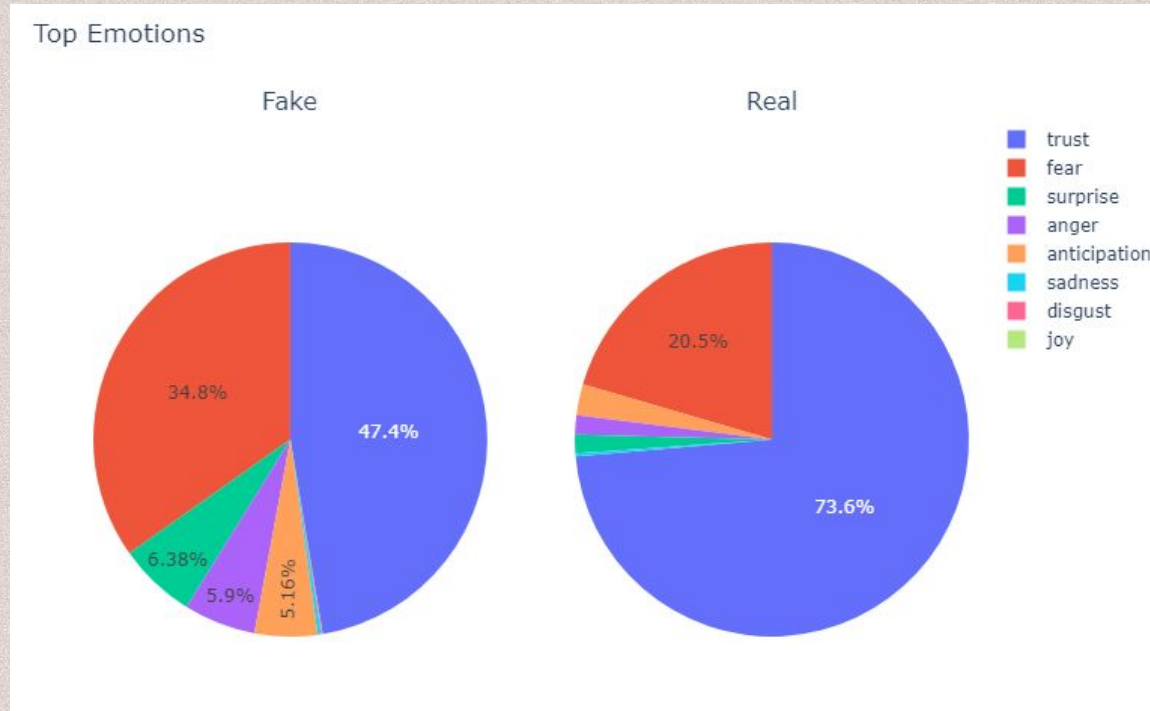
Lexicons used
- Sentiment: Vader NLTK
  - Ranks sentiments from -1(negative) to 1(positive)
  - Eg. of negative words: murder, hell, condemn
  - Eg. of positive words: love, greatest, paradise
- Emotion: NRC Emotion Lexicon
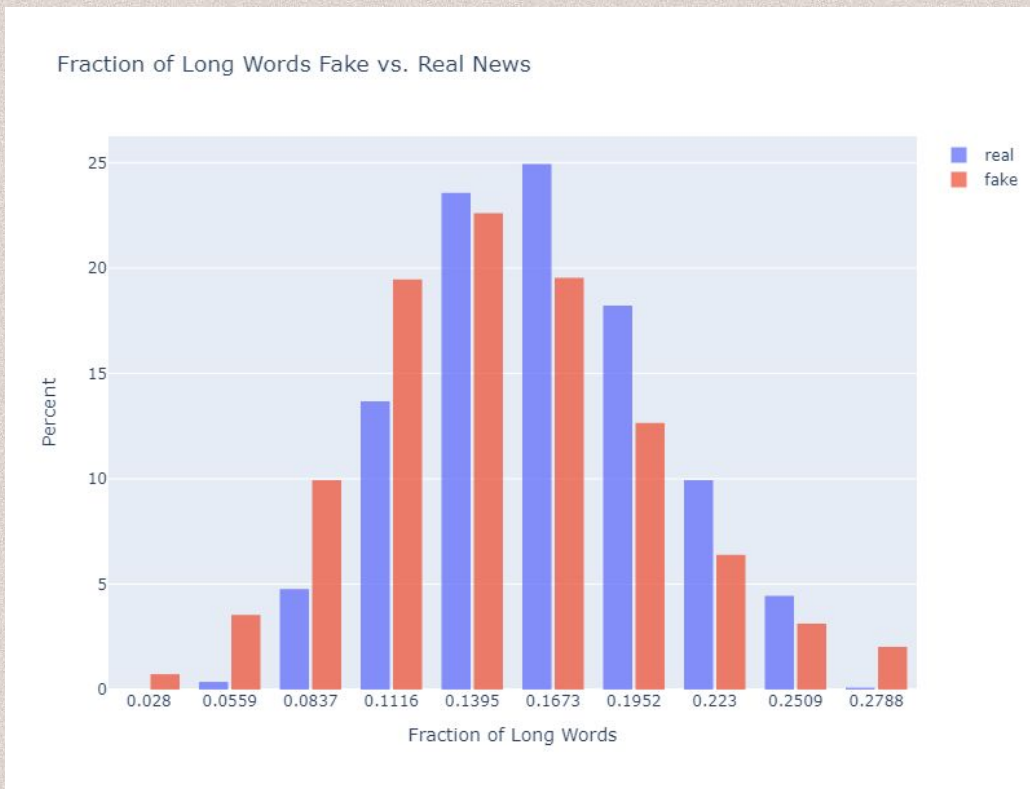 - Words associated with 8 emotions, including anger, trust, joy, sadness

Insight #1: Real news has more positive sentiment

Insight #2: Fake High Emotion Variety

Top Emotions

Fake | Real

trust
fear
surprise
anger
anticipation
sadness
disgust
joy

Fake: 47.4%, 34.8%, 6.38%, 5.9%, 5.16%

Real: 73.6%, 20.5%

Insight #3: Longer Words in Real News

Fraction of Long Words Fake vs. Real News

Thanks for listening!

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