

**This is why you can't  
trust new things  
...or Twitter**

FRAMED, POSTED,  
INJECTED &  
SCRAPED



**Paul Moore** 

@Paul\_Reviews

Think your banking information is safe?  
Think again.

Here's what happens when your bank doesn't implement the most basic of security features. Here, we intercept the username & password... but we can collect \*anything\* the user enters  
[#hack](#) [#bypassTLS](#) [#CSP](#) [#GDPR](#)  
[@AskHalifaxBank](#)

# SECURITY HEADERS: **SECURITY BEYOND TLS**

Whilst a growing number of websites deploy TLS, the implementation of adequate security headers lags woefully behind.

Here's an example of why they're so crucially important...

**OPEN HALIFAX BANK**



# iPhone 3G

Steps removed and sequence shortened.  
Network speeds may vary.





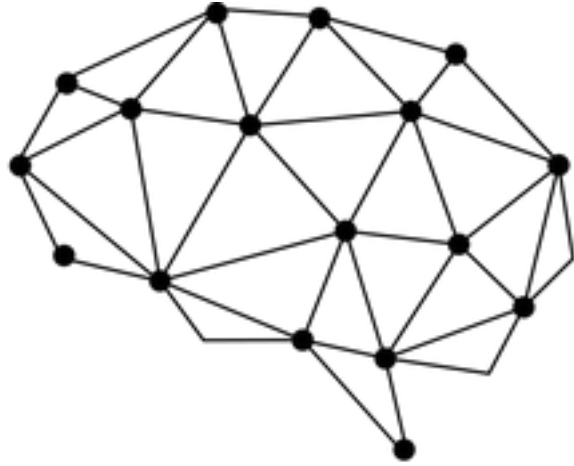
**LIVE DEMO**



**WHAT COULD GO WRONG?**



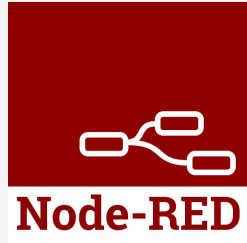




# Solihull Analytica

# WARNING

This is live Twitter data; I'm only filtering by topics so there may be language or views that offend.

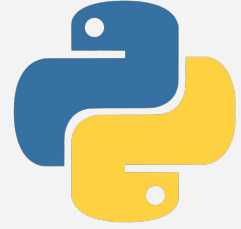


Acquisition



Google Cloud Platform

Storage



Analytics

# *Sentiment Analysis*

The use of natural language processing, text analysis and computational linguistics to systematically identify and quantify affective states.

... in other words it's AI that works out how much you like something.



Every week we send  
**£350 MILLION TO THE EU**  
Enough to build a new  
**NHS** hospital every 7 days

CLICK TO HELP THE **NHS**



**TURKEY HAS A  
POPULATION OF  
76 MILLION**

A map of Europe with the United Kingdom highlighted in blue and Turkey highlighted in red. A large red arrow points from Turkey towards the UK. A circular icon containing seven human figures is positioned over Turkey.

**TURKEY IS JOINING THE EU. GOOD IDEA???**

**YES**

**NO**



**Healthcare and Border Security  
were part of the 1433 different  
micro-targeted campaigns used  
by Vote Leave on Facebook**

This is a really small sample of data and we've reduced people to three attributes (Brexit opinion, EU opinion, social topic interest).

A fuller system would probably do more:

- Categorize retweets and likes different to new tweets
- Build a graph of followers and followees (e.g. PageRank)
- Track more topics
- Use more than sentiment analysis to infer opinions

**People identified as having  
an interest in animal rights**

The **EU** blocks our ability  
to speak out and  
**PROTECT** polar bears!

[CLICK TO HELP THEM](#)





THESE ARE ANIMALS.  
NOT ENTERTAINMENT.

**STOP ANIMAL  
ABUSE**

**People identified as having  
an association with a  
specific location**

**Last year  
Storms Desmond  
and Eva devastated  
our community**

Do we need better  
flood defences?

NO

YES







**Vote to Leave** ☒

**BETTER FOR FAMILY BUDGETS. MEANING  
LOWER BILLS FOR HARD-PRESSED FAMILIES.**

**CLICK HERE**







# The Internet is always evolving

For every extant species, there's 100 others that weren't good decisions

# Each new technology creates new opportunities to attack people

Just being on the Internet gives people information about you and stealing bank details is nothing compared to the money to be made overthrowing governments