VAXWATCH

Vaccination Attitude eXploration & Watchdog for Analyzing, Tracking, & Combating Hesitancy

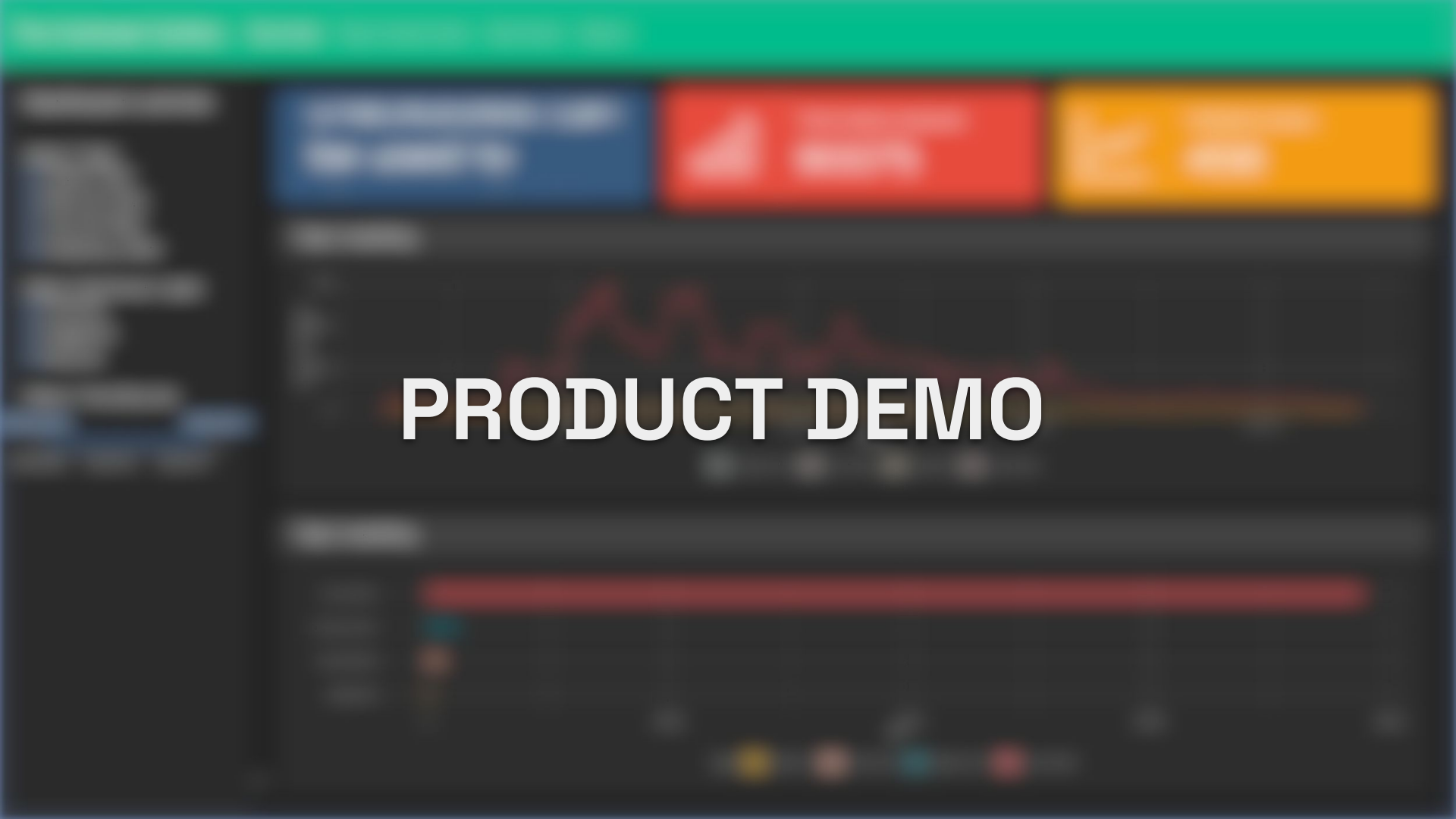
Elevator pitch

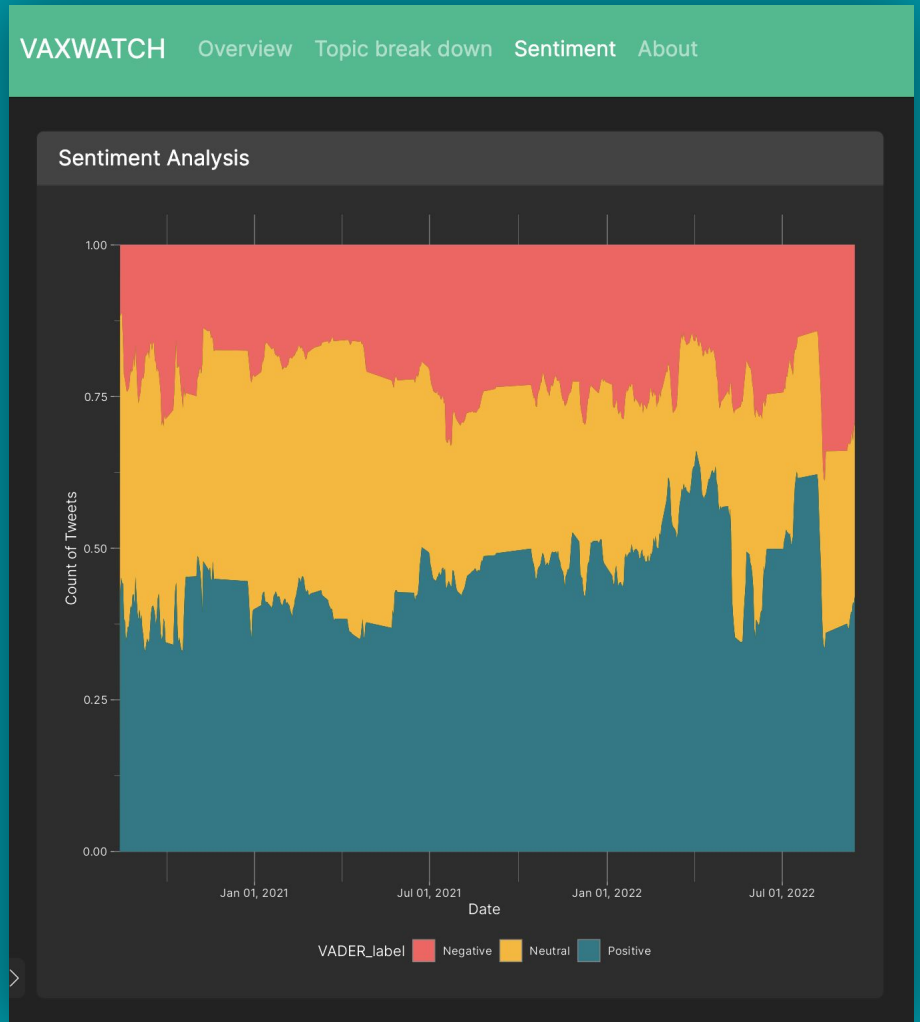
Problem

Scale

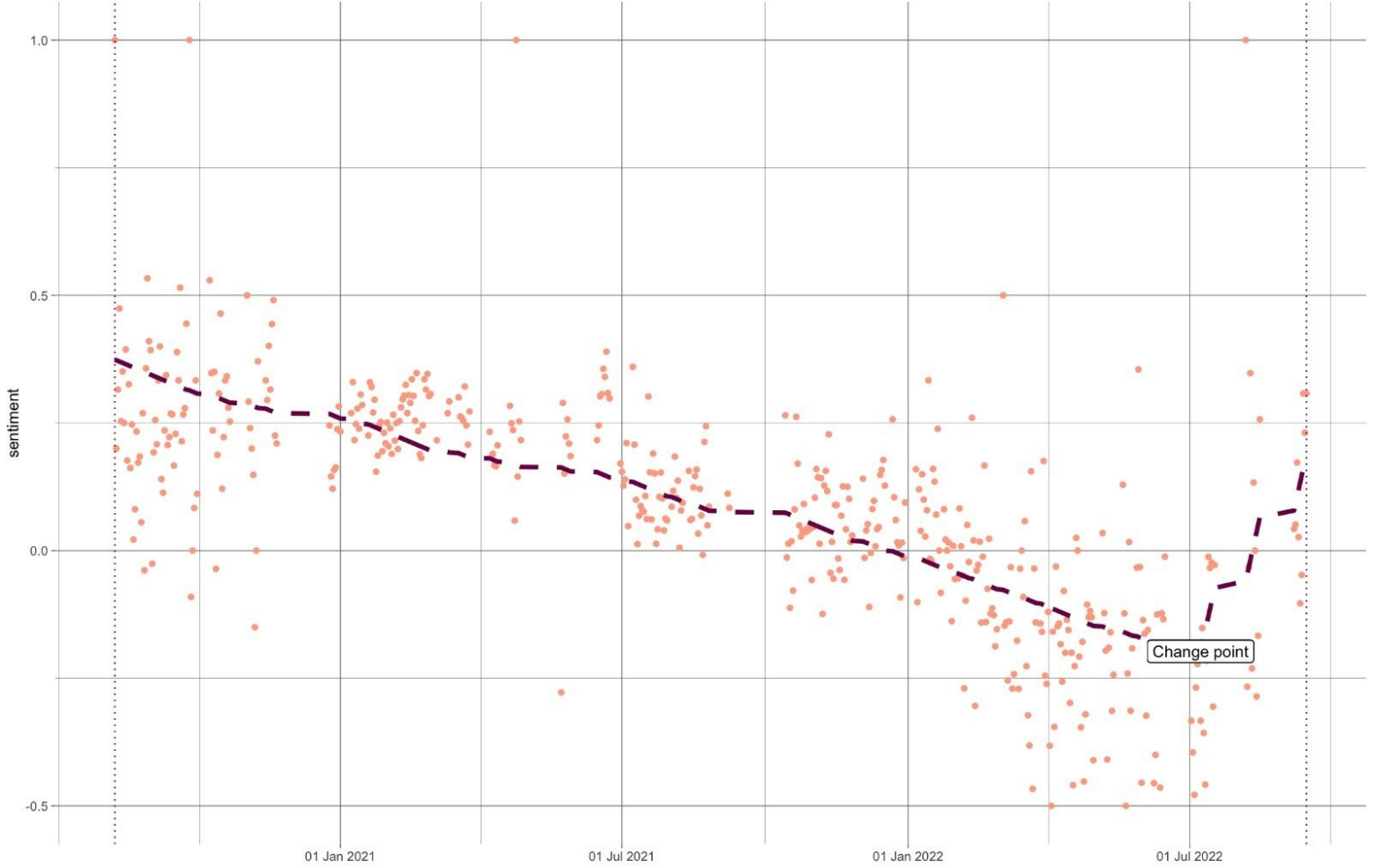
Current approach

1. Gaps in the current approach
2. Proposed solution
3. How does it fill the gaps?

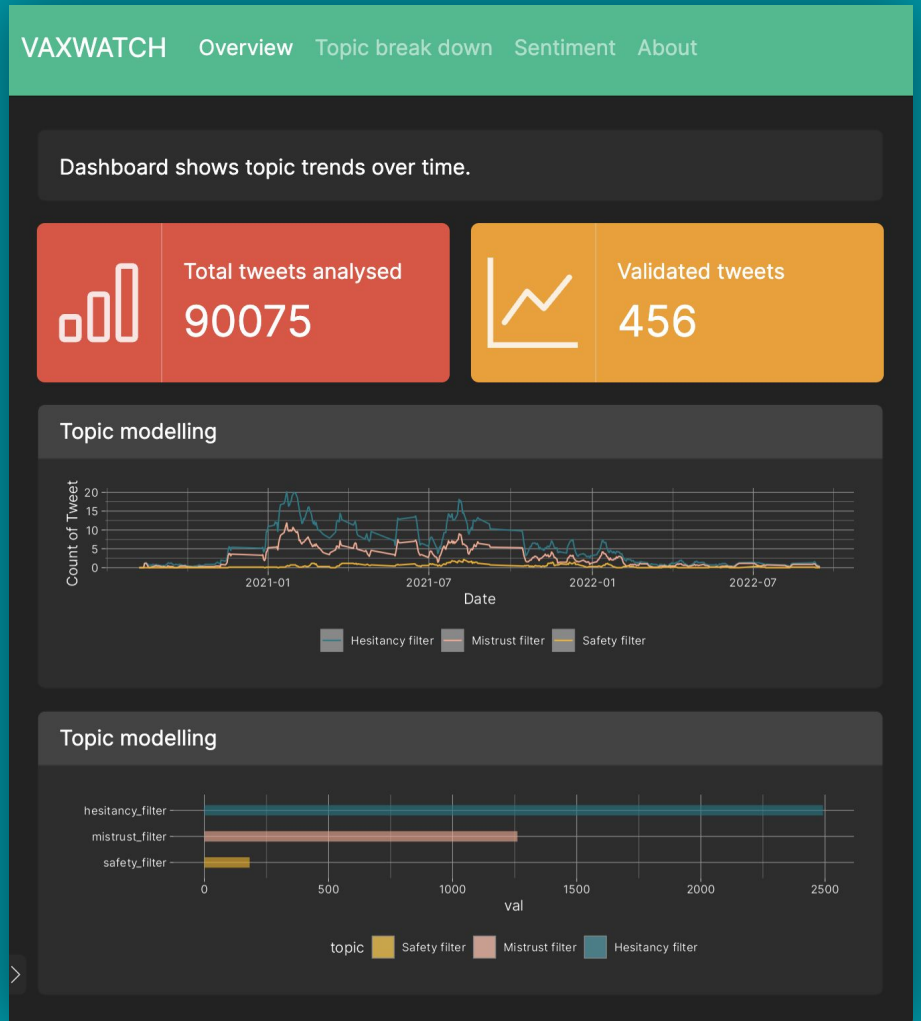

PRODUCT DEMO



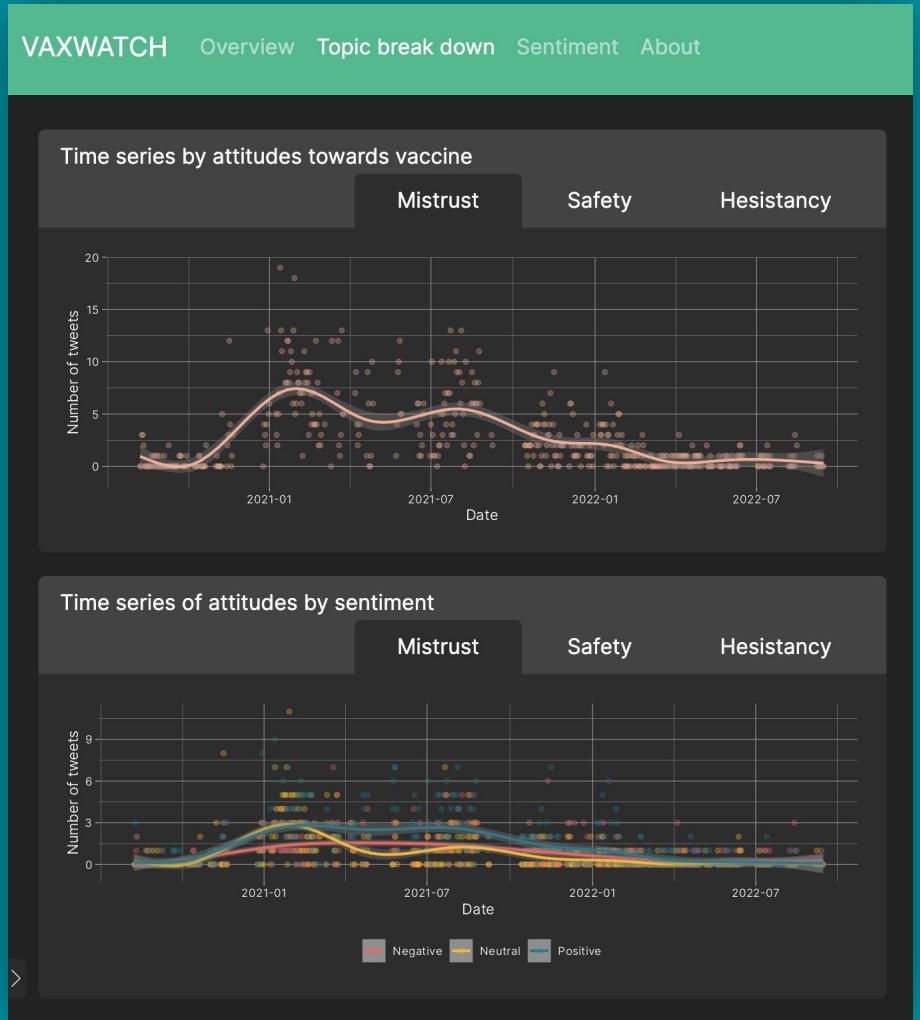
Flagging sentiment allows for early interventions


1.0
0.5
0.0
-0.5
sentiment
01 Jan 2021
01 Jul 2021
01 Jan 2022
01 Jul 2022
Change point

e.g.



Identifying attitudes helps to understand hesitancy



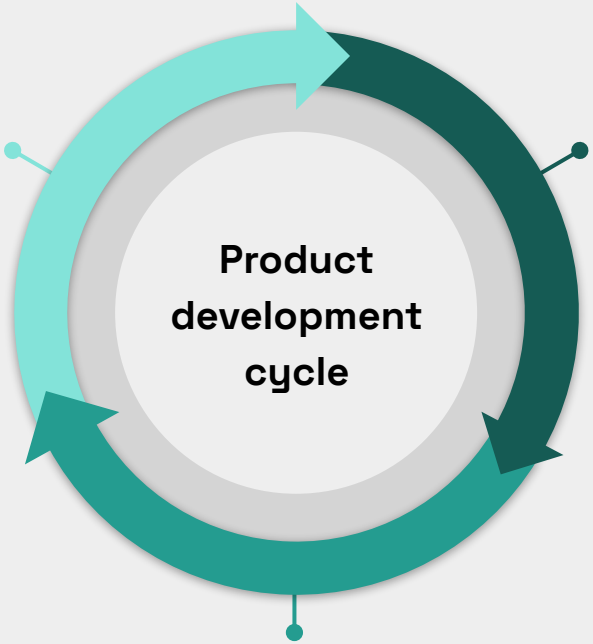
Understanding topic trends helps to minimise mistrust

NLP

the pipeline and the caveats

Classifier validation

Assessing the classifier's ability to generalise to new data



Public feedback

Continuous collaboration with the public to increase transparency and trust

Real time analytics and forecasting

Acknowledging uncertainty and disclosing the limitations

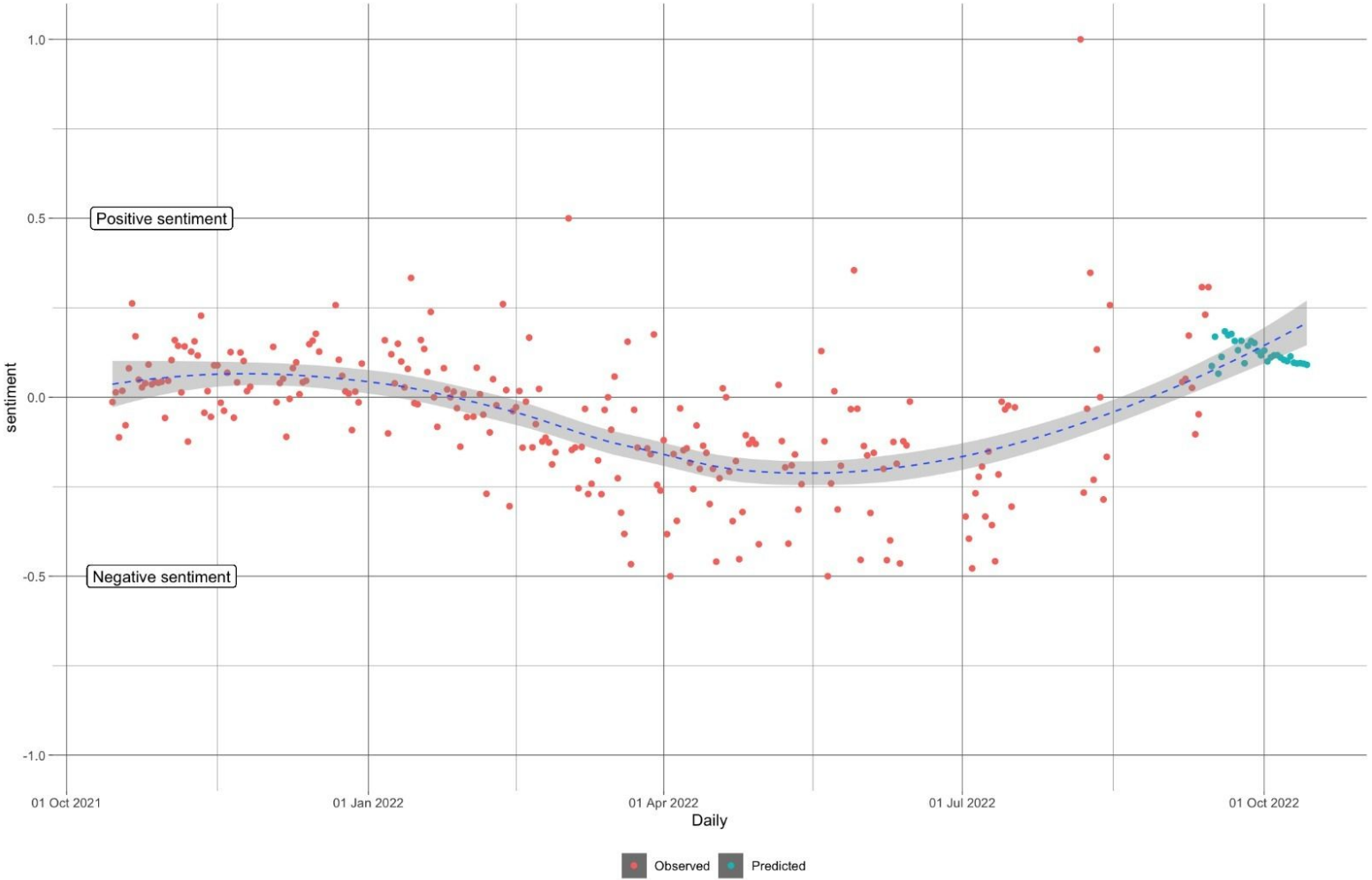
Building trust

and our plan to achieve it

- Public facing online forum
- Ongoing collaboration with stakeholders
- Impact assessments/transparency reports
- Encourage and incorporate community contributions
- Multilingual support
- Accessible and well-documented code

Real time analytics

- Improving topic recognition
- Extend to different languages
- Speed/performance trade-off
- Forecasting
- Interpretable models


1.0
0.5
0.0
-0.5
-1.0
sentiment
Positive sentiment
Negative sentiment
01 Oct 2021
01 Jan 2022
01 Apr 2022
01 Jul 2022
01 Oct 2022
Daily
Observed
Predicted

e.g.

Validating Classifiers

to establish model generalisability

- Internal validation
  - Subset of our own data
- External validation
  - Datasets from other researchers
- Ongoing validation via crowdsourcing and feedback

Dealing with Trolls

how good is the model at classifying users, bots and trolls

- Distinguishing between genuine sentiment and attempted influence is incredibly difficult (even for humans)
- We can say it is one or the other
- Still useful, further research can explore this in more detail

Thank you for your attention!