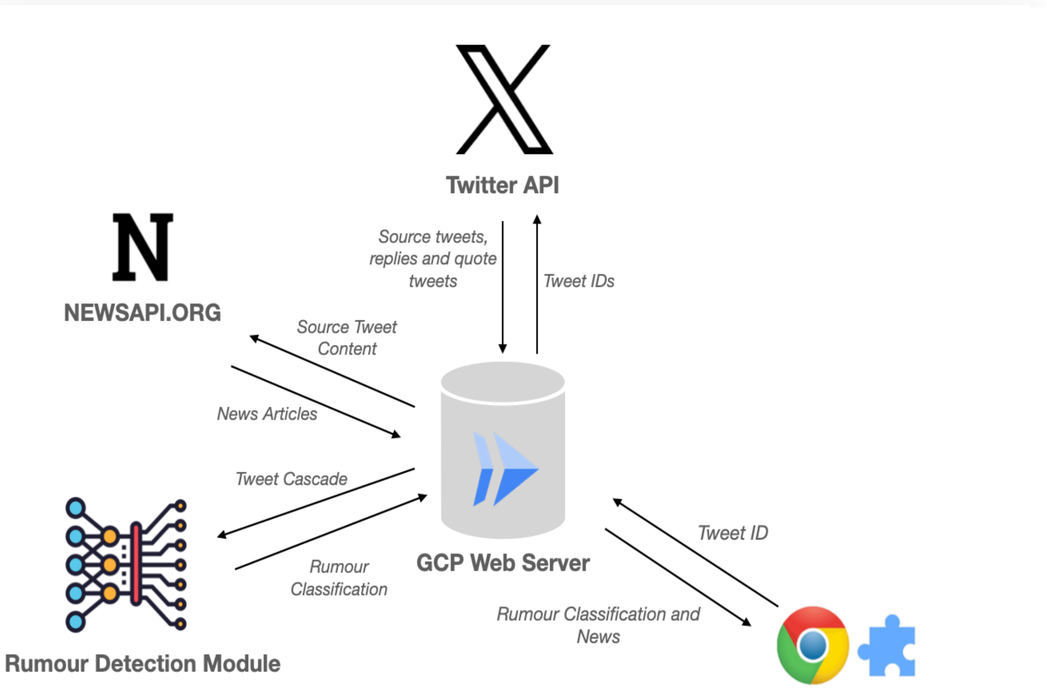
TL;DR: Users derive benefit whilst using a browser extension leveraging SoTA models for rumour detection in real time.

Rumour Detection in the Wild: A Browser Extension for Twitter

Background: Users wishing to perform rumour detection for themselves cannot directly leverage SoTA solutions published in the literature; these are typically deployed by social media companies. We develop a novel rumour detection browser extension to address this issue.



Data

Twitter15 Twitter16

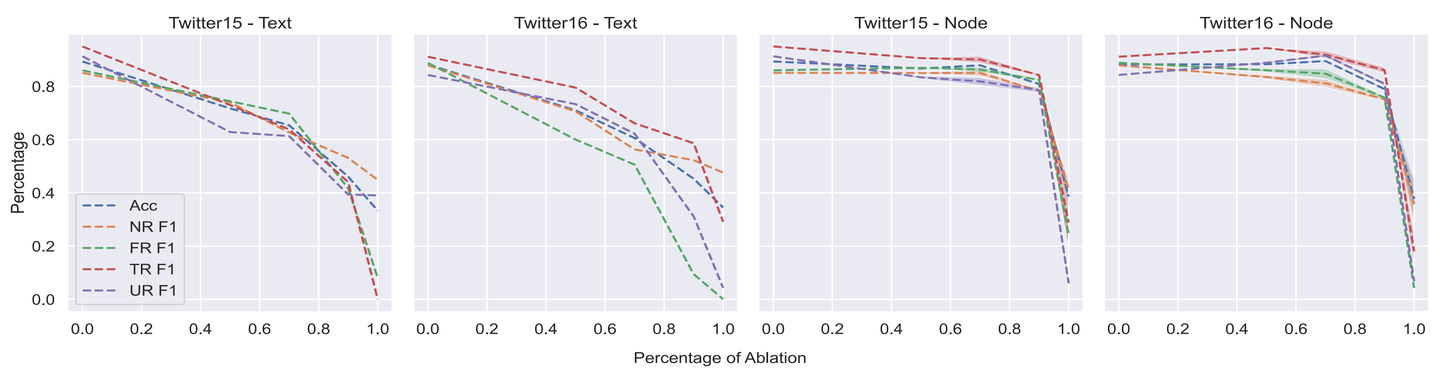
Methods:

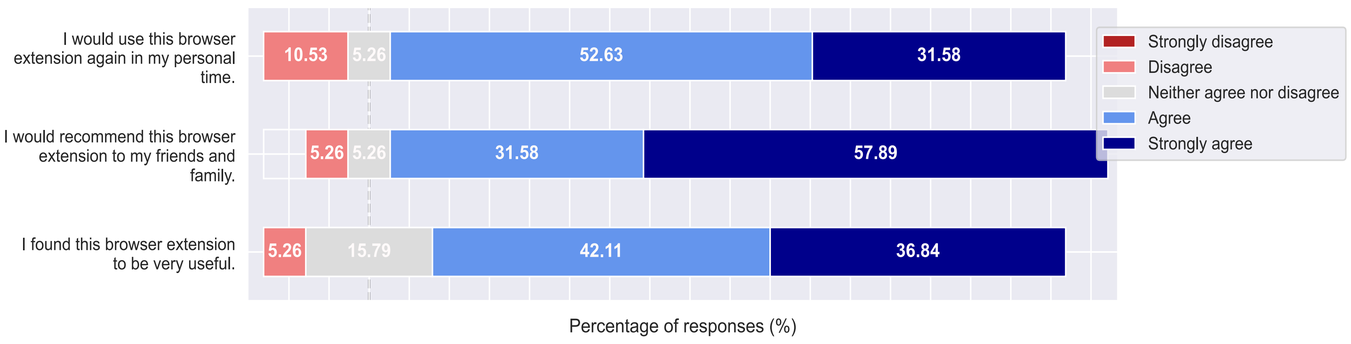
1. We stress-test a SoTA rumour detection model in a simulated deployment environment on out-of-distribution (OOD) data tasks, and on data ablation tasks.
2. We evaluate the effectiveness of our browser extension with a user study.

Findings

Data Ablation Tasks

Rumour detection models generally underperform when there is no linguistic signal from the content (missing textual features). However, the model is still able to correctly identify the rumour status of a tweet without access to the full cascade.





User Study

Users generally found benefit when using the browser extension tool whilst performing rumour detection on Twitter as it created additional informative context for the tweet. However, additional measures, such as a robust retraining mechanism, need to be into place to make users more confident in the tool's performance.

Conclusions and Future Work: Our work shows that this tool provides benefit to those Twitter users wanting autonomy over their rumour detection. However, we note that our work is merely the first iteration in a series of deployments.

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