Fake News Warning

The Fake News Warning Application is a browser extension and backend engine for flagging and displaying fake news scores of each article. It was used as a showcase application of the NuNet platform.

The user interface is a Chromium browser extension — it works on Chrome, Brave, Microsoft Edge, Opera, and other Chromium-based browsers. It is a graphical user interface to the backend that is constructed from SingularityNET AI Services available in the SingularityNET marketplace running on NuNet.

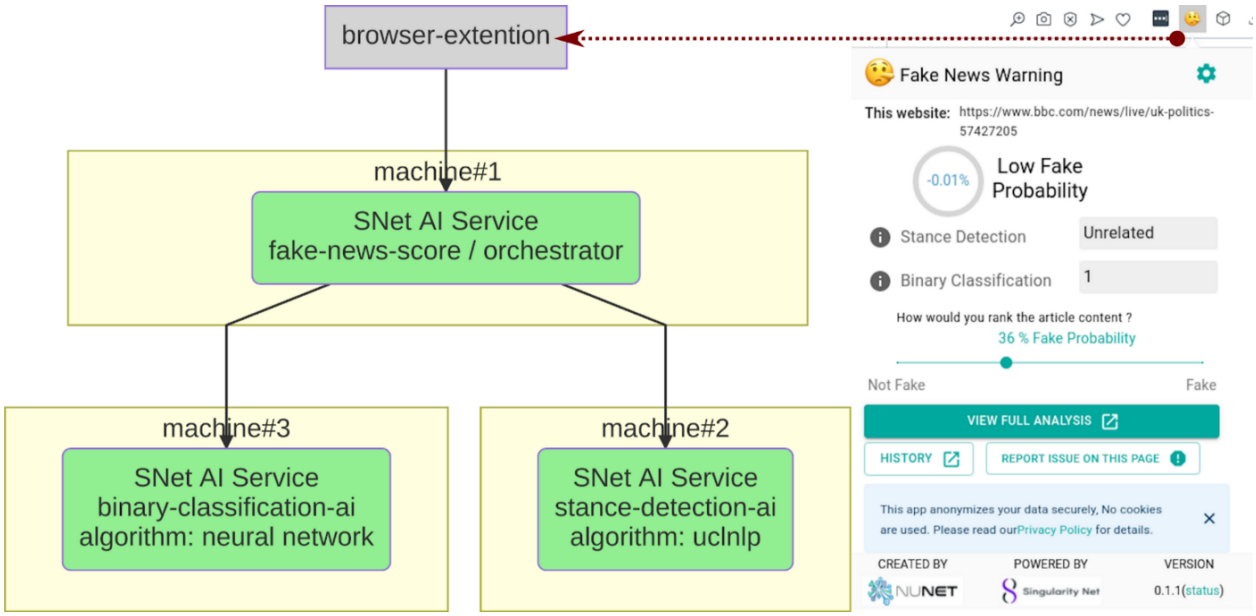
In 2016, some young folks in Macedonia realized there was a simple way to get breaking news that would drive those clicks and earn money: simply make the news up. They made good money throwing up stories like ‘Pope Francis Shocks World, Endorses Donald Trump for President’, and the modern fake news era was born.

The fake news warning browser extension sends the content of the browser tab to a NuNet service orchestrator, which calls upon two specific services running on NuNet platform: a stance-detection algorithm and a neural-network based binary classification algorithm. Together, these come up with a score rating the likelihood that an article contains fake news.

The binary classification model uses a 30k fake news article dataset from the Kaggle competition named *Fake and real news dataset*. It uses a BERT model with a single linear classification layer pre-trained with *Classifying the fake news* from the Kaggle competition. The model outputs 1 if an article is classified as fake news and 0 if not-fake.

The Stance-detecton AI service was originally developed by UCLNLP group for the Fake News Challenge in 2017 where it took the 3rd place. We have updated the algorithm to run with modern Python libraries as well as packaged it as a SingularityNET AI Service to be executed on NuNet private Alpha platform.

Based on a pre-trained model, it estimates the nature of the relationship between the title of an article and the body text of an article. The estimation is returned in the form of probabilities attached to four pre-defined types of relation: unrelated, discussing, agreeing, disagreeing. Sum of all probabilities add up to one. The displayed relation has the highest probability attached by the algorithm.



Our main motivation in building this showcase application was to demonstrate how NuNet can construct application-specific service meshes for any AI service and business logic, rather than a specific Artificial Intelligence algorithm that warns about fake news.

As the Fake News Warning application in its current form was intended to be a proof of concept to showcase the NuNet platform, further development will be needed to warn of Fake News in the modern era.

We are looking for partners who wish to further develop the Fake News Warning application in a decentralized way for their own use case and are interested in:

- The ideas and motivations behind the Fake News Warning Application.
- Building out the business model for the Fake News Warning Application.
- Further development of modules and their components, including UI, AI, integration with other platforms, etc.;
- Developing new modules for integration to the backend;

- Researching fake news debunking resources and establishing partnerships with them. It would be ideal for the backend to find a news debunking system which has an API access. Otherwise it will have to use existing or develop webpage scraping tools.
- Developing an API for describing news items and fake news statements, possibly using existing API's (research needed);
- Using existing data exchange protocols, design and develop a scalable approach to ingesting data from many autonomous data sources, possibly using Ocean Protocol and data tokens.
- Increasing the confidence, accuracy, and calibration of the AI model and further training the AI services and/or plugging in AI services a partner already may have.

The partner will need to commit to:

- Work towards integration with NuNet's decentralized computing platform and SingularityNET's AI platform and marketplace for the next 2 years.
- Contribute regularly to needed platform improvements in order to be successful as a use case integrator, as outlined in our development model.
- Provide the NuNet team access to the code and help us in understanding how the platforms can be better adjusted to their needs for further developing/implementing the business model.
- Build out the use case using open source software, and keep the app open source;
- Keep the application open source and decentralized, as much as possible for the business case;

We will be giving the selected partner all the code, design documents, and any other documents needed to take it over for free. You can find all the information and code in:

- Our gitlab fake-news-detection repository;
- Ideascale page (proposal for Catalyst Fund 2);
- Mini-website explaining the initial idea and architecture behind the project;
- Explanation of the Fake News Warning Application as it was implemented in the NuNet Platform Private Alpha.

You are welcome to head directly there, inspect the existing issues and ask questions via comments or by emailing us via contact@nunet.io.

Through collaboration, we will give access to our rich decentralized AI community as we are part of the SingularityNET Ecosystem. The ecosystem brings many benefits, e.g.:

- In order to help you with funding, you could consider applying for a grant through SingularityNET's Deep Funding program, which can be used for NuNet and SingularityNET needed integrations, creating AI services, or utilizing AI services in any application, amongst others.
- Cross-promotion of your app in our ecosystem to nearly 400K community members.
- Access to a broad range of SingularityNET Ecosystem experts that can contribute to your business model, as well as opportunities in inter-ecosystem partnerships with other members of the SingularityNET Ecosystem and/or being a part of our external partnerships if applicable.

If you would like to contact us and collaborate with us in further developing the Fake News Warning application, reach out to us via email.