

The Truth Behind Fake News: Tools and Techniques for Detection

By 3_datamen

A Deep Learning tool that uses cutting-edge technology to detect authenticity of a news article, simply by entering its details.

Live Demo

Enter Article Details

Title

Minimum Wage increases in Canada

Source

https://www.canada.ca/en

☒ Have image

☐ Have Video

Article Details/Description

Enter Article Description/ Details to Evaluate

Every Canadian deserves a real and fair chance at success. Yet some Canadian workers still struggle financially while working part-time, temporary and low- or minimum-wage jobs.

To keep pace with inflation, the federal minimum wage will increase from \$15.55 to \$16.65 per hour on April 1, 2023. Based on the Consumer Price Index, which rose 6.8% in 2022, the increase will help make life more affordable for the approximately 26,000 Canadian

Evaluate

Results

Bert

True: 81%

False: 19%

GPT2

True: 78%

False: 22%

LSTM

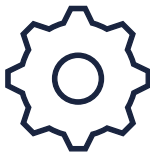
True: 57%

False: 43%



1. Introduction

- The spread of fake news on social and online media can intensify conflicts, promote discrimination, and undermine democracy, making fake news detection important.
- Detecting fake news is challenging due to the huge volume of information online, diverse formats, topics, and sources, and fake news makers getting better at disguising it.



2. Methods

- Integrated dataset from different sources to form training, validation, and test sets
- Transfer learning and fine tuning on three popular general purpose NLP models
- Live data and feedback collection for updating models continuously



3. Results

- Developed and deployed three fake news detectors
- All three models can achieve >86% accuracy on test set
- GPT-2-based model achieved a 93% accuracy on test set, with a f1-score of 91% on "Fake" class



4. Benefits

- Protecting credibility
- Promoting accuracy
- Preventing misinformation
- Saving time and resources

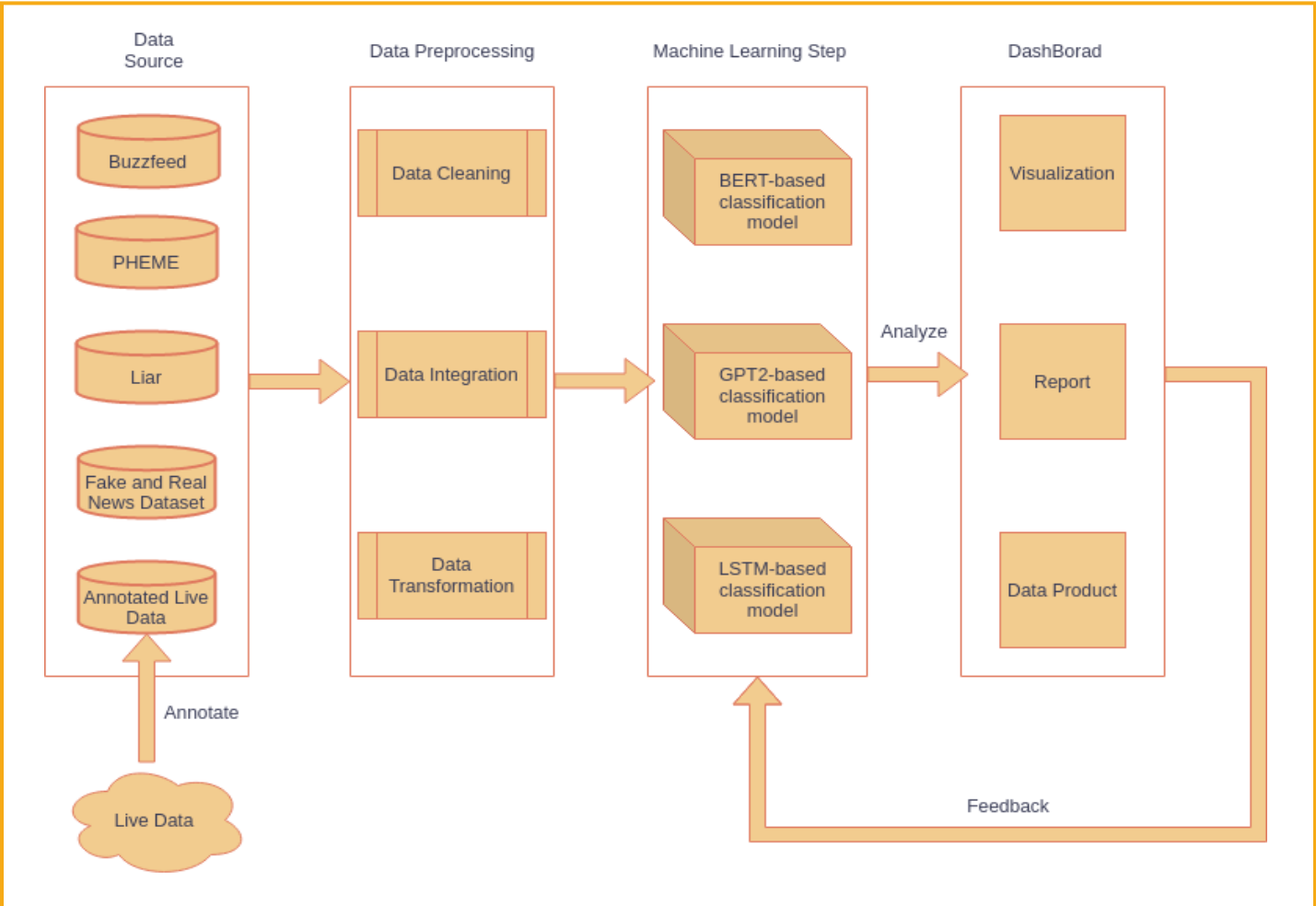


Figure 1. Project architecture. Data from different sources will be fed into three models after cleaning, integration, and transformation. A frontend dashboard will display demo and analysis results

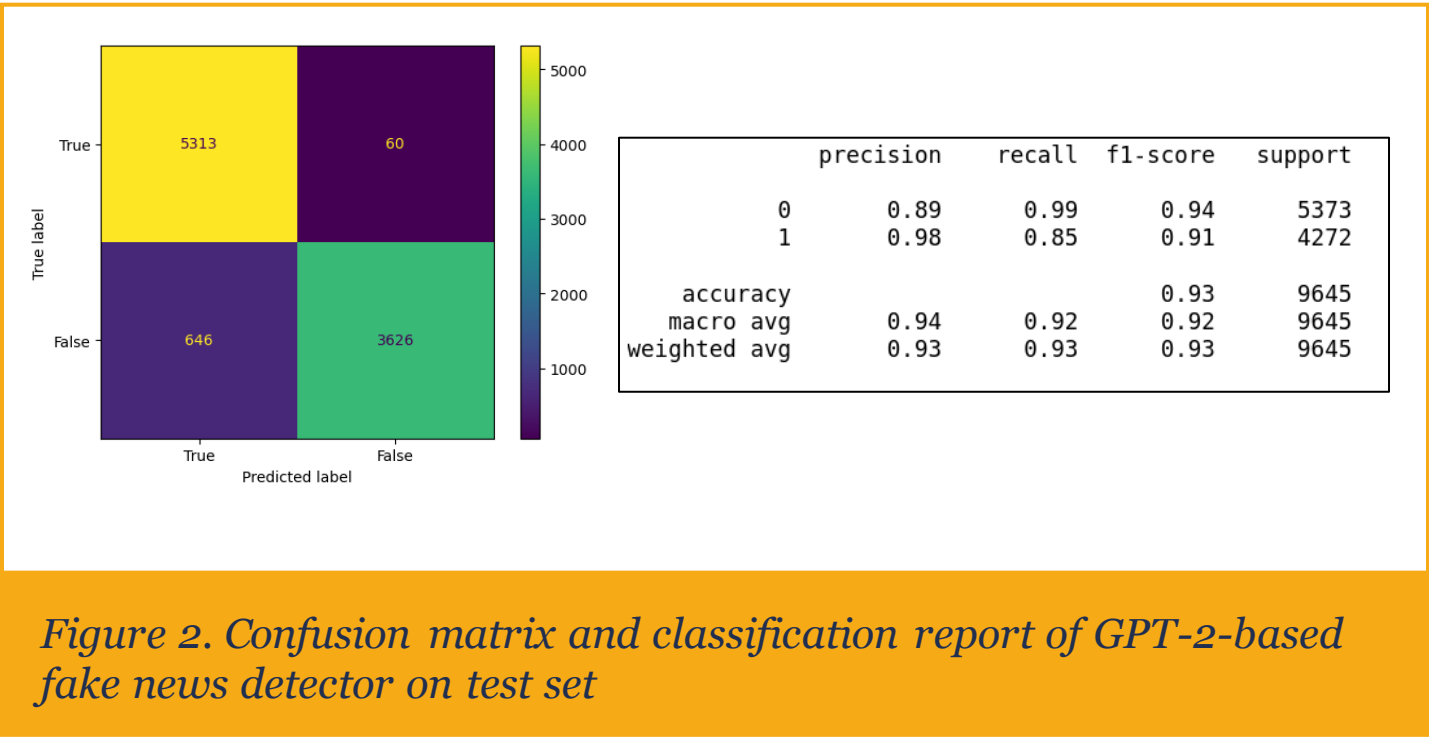


Figure 2. Confusion matrix and classification report of GPT-2-based fake news detector on test set



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3_datamen
Song Lin (sla475)
Shlok Nangia (sna101)
Jialiang Guo (jga169)



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