AlHakikaNews

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Détail des utilisateurs expand_more

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Résumé

AlHakikaNews is an AI-powered platform combining GenAI and ML models to detect, classify, and report fake news. It offers a full pipeline solution that fights misinformation and disinformation through deep language understanding and real-time analysis.

participant information

team or individual

individual

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Team Members (if applicable):

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Solution Overview

Solution Title

AlHakikaNews

Is this submission a full pipeline or a detection model only?

Full Pipeline (Detection + Identification + Reporting)

Short Summary (2–3 lines about your approach)

AlHakikaNews is an AI-powered fake news detection platform designed to combat digital misinformation. It leverages GenAI-based NLP models and classical machine learning classifiers to analyze, classify, and report potentially fake or misleading content in real time, with an intuitive web interface for public use and media transparency.

Problem Definition

What specific DeepFake challenge(s) does your model address? (e.g., low-resolution detection, audio-visual mismatch, real-time detection)

Our solution targets misinformation and disinformation in textual and visual content, often amplified through social media and fake news channels. It detects fabricated news using advanced language pattern recognition and context-aware analysis. Additionally, it addresses challenges such as semantic inconsistency, low-context clickbait headlines, and cross-source narrative conflicts.

What makes your solution innovative or unique?

AlHakikaNews integrates GenAI model as Gemini and GPT with custom classical models (Logistic Regression, Decision Tree, Gradient Boosting) in a hybrid pipeline. The platform allows users to verify claims in real-time and provides visual reliability scorin

Technical Information

Key Technologies Used (check all that apply)

- Deep Learning
- Computer Vision
- Transformers
- NLP

Model Architecture Summary (max 5 lines)

GPT-4 and Gemini is used to semantically evaluate news articles.
Preprocessed datasets train classical models for binary classification.
Ensemble logic compares AI and ML outputs to improve reliability.
Node.js web interface enables user queries and feedback.
Results are reported with confidence scores and tag suggestions.

Model deployment

Cloud

Training Dataset(s)

Name(s) and source(s)

Fake and True News Dataset (Kaggle: "Fake and Real News Dataset")
Manually collected headlines and articles from Moroccan/French/Arabic sources for validation.

Dataset Size and Type

~44,000 articles (23,000 real / 21,000 fake)
CSV structured format with labels (title, text, subject, date)

Data Preprocessing Steps:

Text normalization, punctuation removal
Tokenization, stopwords removal, stemming
Feature extraction using TF-IDF
Label encoding for supervised models
Semantic embedding pipeline for GPT input

Performance & Evaluation

Evaluation Metrics Used

- Accuracy
- Precision
- Recall
- F1 Score
- AUC-ROC

Performance Scores (on validation/test sets)

Accuracy

95.3%

Precision

94.8%

Recall

95.9%

F1 Score

95.3%

Other (e.g., Latency)

GPT API response: ~500ms
Web interface full round-trip (cloud): ~1.2s
Ensemble model latency: ~1s average

Any bias or fairness checks conducted?

Yes

If yes, please summarize

We ensured language and topic diversity in training sets and evaluated false positive rates across article sources and regions. Additional testing was done on African/MENA news to reduce cultural bias.

Integration & Deployment (Optional but Encouraged)

Is your model deployable in real-world settings?

Yes

If yes, please describe the deployment environment or use case

The current prototype runs on Replit Cloud with Node.js and integrates OpenAI’s GPT-3 via API. The frontend allows journalists, educators, and the general public to input article text or links and receive credibility scores and flagged keywords. Deployment to a Moroccan cloud platform is planned for media partnerships.

Have you tested for adversarial robustness?

Not yet

Submission Checklist

Attach

- Model File(s): .zip, .pt, .onnx, .h5, etc
- Documentation: Architecture + Training + Evaluation

📜 Declaration

I confirm that this submission is original work and does not infringe on any third-party rights. I grant permission for the competition organizers to evaluate the submitted model and showcase it for educational or research purposes if shortlisted.

I Confirme

Date

29/04/2025

Attach the demo

1 document