

Fake News Generator & Detector using Generative AI and NLP

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13 July 2025

Introduction

- Fake news is a growing problem in the digital age.
- Misinformation can spread quickly and cause real-world harm.
- AI can both create and detect fake news.

Project Overview

- Fake News Generator: Uses GPT-2 to create realistic fake news headlines.
- Fake News Detector: Uses BERT to classify news as real or fake.
- Web App: Interactive interface for generation, detection, and data visualization.

How It Works

1. User enters a prompt.
2. GPT-2 generates fake news headlines.
3. User submits a headline for detection.
4. BERT model predicts if it's real or fake.
5. Dataset stats and model performance are visualized.

Results & Demo

- Generated Headlines:

"Breaking news: Scientists discover a new planet in our solar system."

"Government announces free healthcare for all citizens."

- Detection Example:

Input: "Aliens land in New York City."

Output: FAKE (score: 0.98)

(Insert screenshots of your web app here)

Ethical Considerations

- Generative AI can be misused to spread misinformation.
- Important to develop robust detection tools.
- Responsible AI development and deployment is essential.

Conclusion

- Demonstrated both the power and risks of AI in news.
- Built an end-to-end system for generation and detection.
- Future work: Improve model accuracy, expand dataset, deploy online.

Thank You / Q&A

- Questions?

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