# A Cross-Verification Approach for Identifying Tampered Audio

Challenge:

- It is easy to generate deep fake videos or digitally manipulate real audiovisual data
- This technology can have large impacts when involving high-profile individuals
- This project focuses on protecting world leaders by identifying fake or tampered audiovisual data

Solution:

- Approach from a history-centric perspective: "Is this video a historically verifiable event?"
- Focus on cross-checking against other primary sources of audiovisual data (e.g. major news outlets) to verify authenticity
- Develop technical tools for cross-verification of audio data

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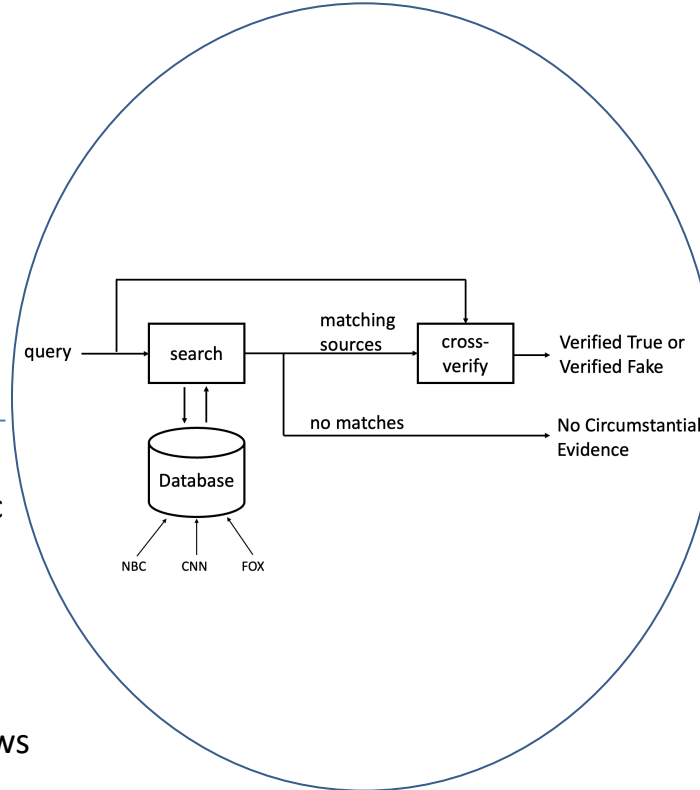
A history-centric approach to detecting fake or tampered audiovisual data of world leaders. The main scientific contributions are developing alignment methods for effective cross-verification.

Scientific Impact:

- Developing alignment methods for cross-checking audio data in two different scenarios
- Scenario #1: Developing pairwise alignment methods for cross-verifying a query against a trusted source recording
- Scenario #2: Developing group alignment methods for checking a set of untrusted recordings for internal consistency

Broader Impact:

- Protect world leaders from fake or tampered videos that might cause instability or unrest at a national level
- Provides tools to establish the reliability of truthful recordings
- Mentoring and training of six undergraduate research students
- Provides seed funding to establish a research lab at a highly diverse liberal arts college