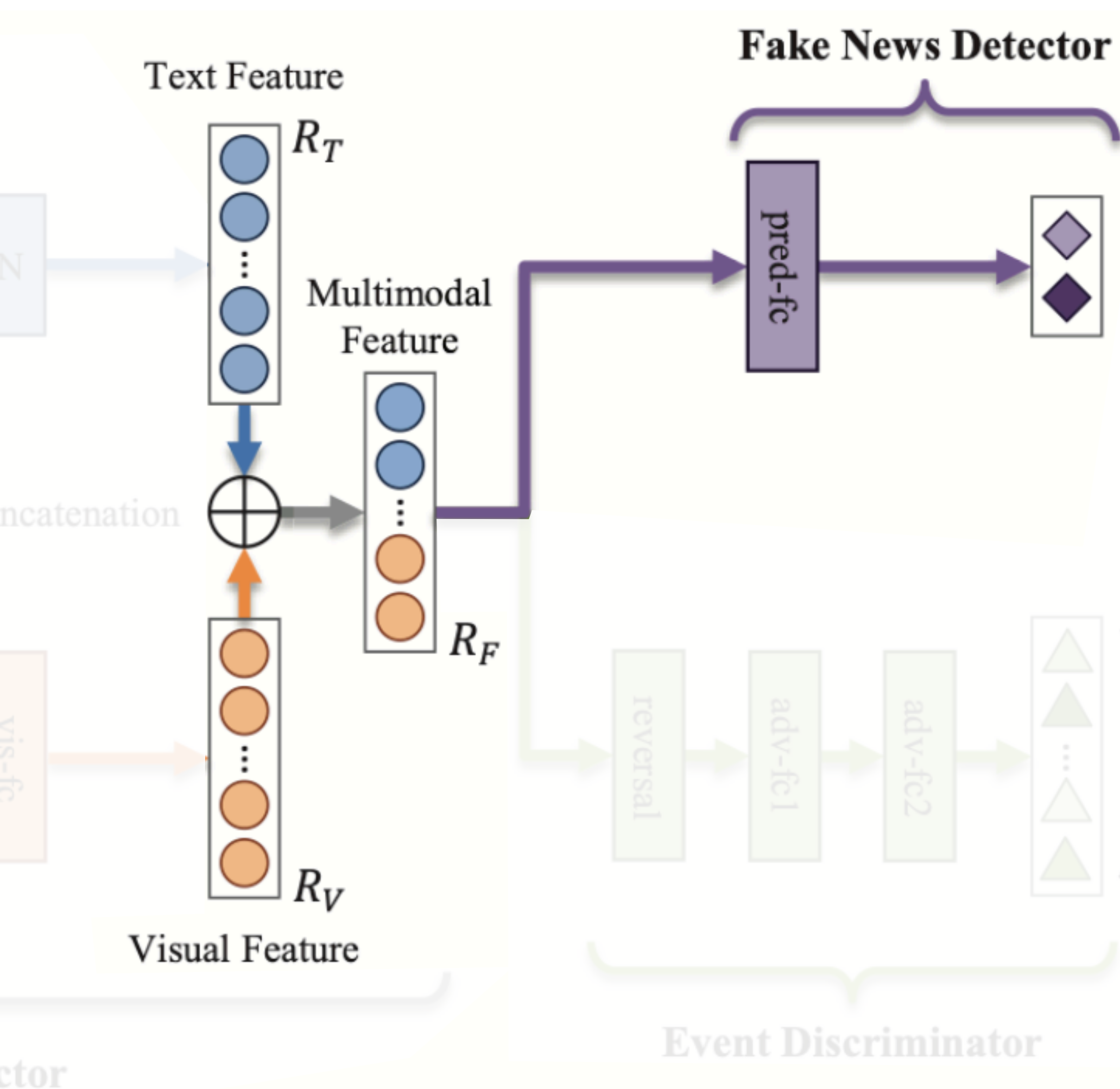


# Methodology.....

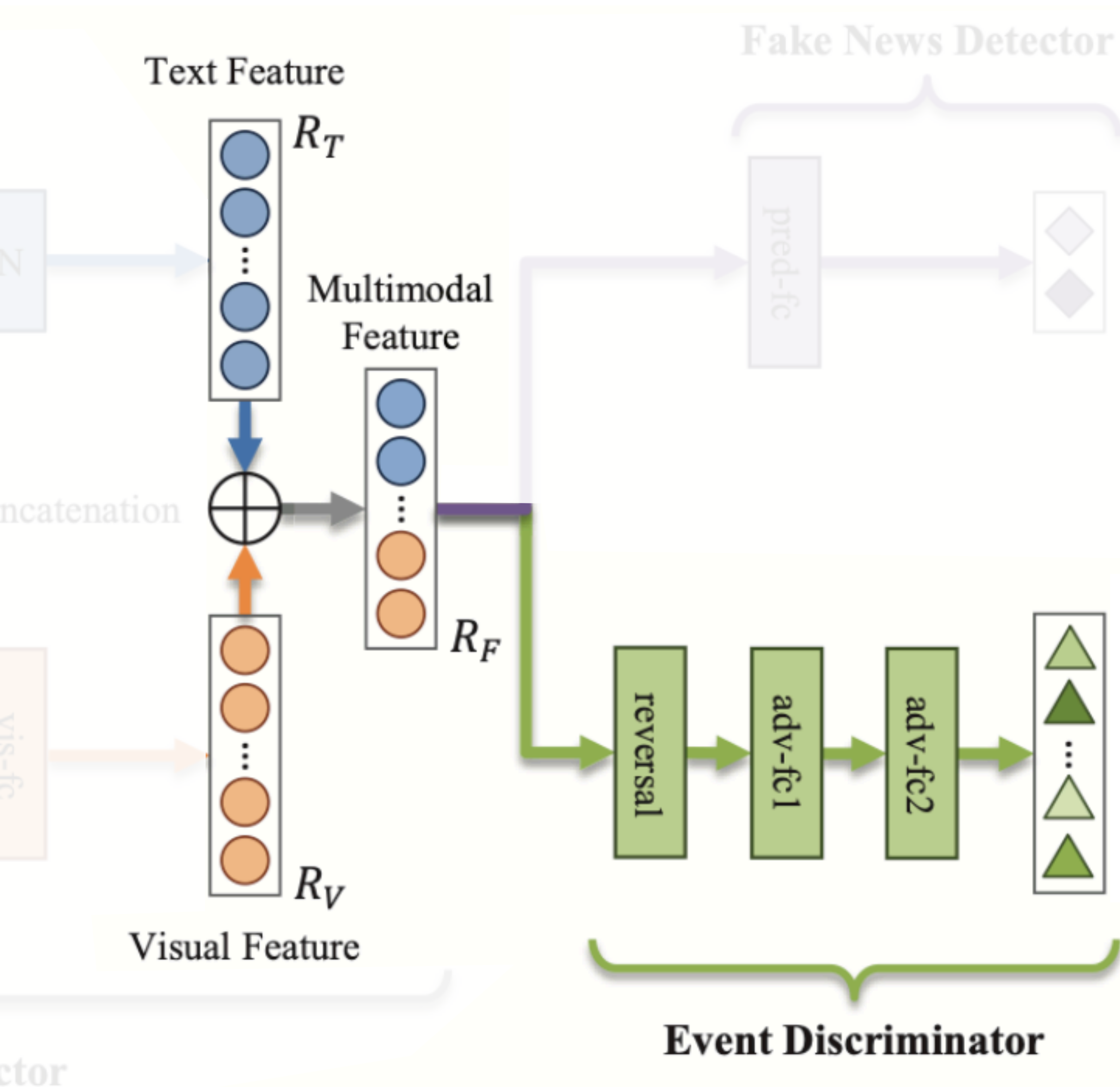
## Fake News Detector



- As main goal of this work is detect the event which not covered by the training dataset.
- Direct minimization of detection loss only helps detect fake news included in the training dataset
  - Capture only event-specific knowledge or patterns
  - Not generalize well
- Need to learn more general feature representations that can capture the common features among all the events.
  - Should be event-invariant and doesn't include any event-specific feature.

# Methodology.....

## Event Discriminator



- Measure the dissimilarities of the feature representations among events and remove them in order to capture the event invariant feature representation.
- NN which consists of two fully connected layers with corresponding activation functions.
- Aims to correctly classify the post into one of K events based on the multi-modal feature representations.
- Denote as  $G_e(R_F; \theta_e)$ ,  $\theta_e$ : parameters