

# News Image Classification

CS 640 Project 2 Topic 2

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# Problem Definition

Nowadays journalists are not the first ones to record an emergency event but any civilians with phones, and they send to social media almost immediately when such event takes place in their proximity.

For this project, we build a system that looks for such event in a pool of images originated from social media feeds; the system consists of two parts:

- Deep Neural Network trained for object detection
- Expert System that yields an emergency level score based on the object(s) detected from images.

# Background & Baseline

- Original Paper and Method Reproduction (Acc: 94%)
- Transfer Learning on Single Class Classification
  - Fine Tuning (86%)
  - Fixed Feature Extractor (84%)
- Transfer Learning on Multi-label Detection (bounding box is a more functional approach ; ))

# Improvement

- **Before Training:** Dataset Quality
- **During Training:** Parameter Tuning
- **After Training:** Extra Functionalities
  - Simple Expert System
  - Crowd Detection

Thanks!

