EMERGING METHODS FOR EARLY DETECTION OF FORESTFIRES

- Forest and urban fires have been and still are serious problem for many countries in the world.
- Currently, there are many different solutions to fight forest fires.
- These solutions mainly aim to mitigate the damage caused by the fires, using method for their early detection.
- The (UAVs), which constantly patrol over potentially threatened by fire areas.
- The UAVs also utilize the benefits from Artifical intelligence (AI) and are equipped with on board processing capabilities

PROBLEM STATEMENT

✓Since satellites have this inherently huge revisit time issues making them less valuable to detect forest fires as soon as possible, because of the hugedeploying costs of wireless sensor networks plus the upkeep that comes with them and because UAVs are extremely versatile, widespread, cheap and can cover huge areas easily, this study will focus only on methods employing UAV data or data similar to UAV data.

✓Using the predicted mask paired with the altitude of the drone, fire units or another algorithm could de-duce the spread of the fire to help organize fire suppression, assert

damage and possibly help decide whether to evacuate citizens in relevant areas

USER PAINS AND GAINS PAINS

PAINS	GAINS
▪ Reduces flame reflections	▪ Difficult to port as Real Time
▪ false alarms	▪ Human interaction not considered
▪ Detection distance	▪ No verification algorithm
▪ Sensitivity	▪ Need of sufficient and specific condition
▪ Speed of response	▪ Variability of shape, motion, colors and patterns of fire and smoke
▪ Range of application GAINS	▪ Hight cost