PROJECT DESIGN PHASE II

Team ID	PNT2022TMID41774
Project Name	Emerging Methods For Early Detection Of Forest Fires
Maximum Marks	4 Marks

Technical Architecture/Stack:

Technical Architecture:

- Environmental issue
- Economic
- Ecological damage

Environmental issue:

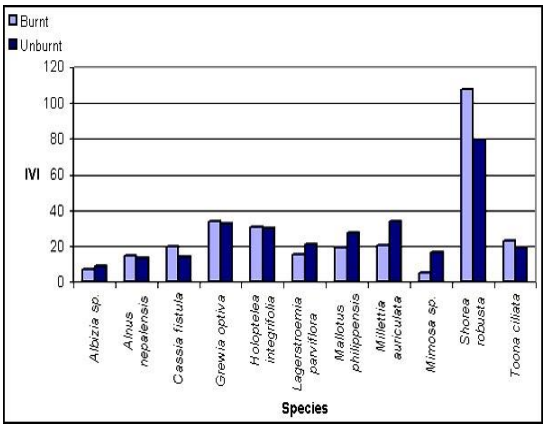
- Wildfires can have immediate and long term effects on the quality of rivers, lakes, and streams.
- The most noticeable impact of wildfires is stormwater runoff.
- After the loss of vegetation, the ground's soil become hydrophobic and prevent the absorption of water.

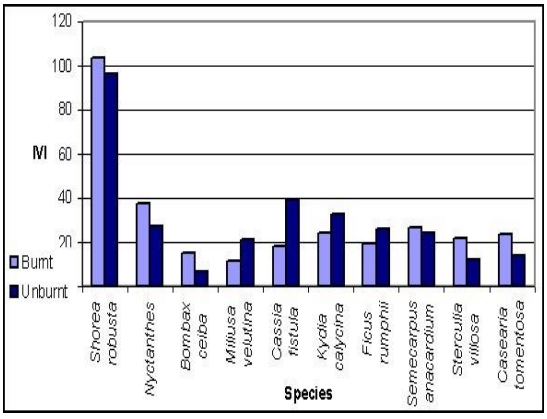
- This inability to absorb water promotes the transportation of debris and sediment into larger bodies of water, further polluting valuable and essential resources.
- Post-fires flash floods become a waterways.
- Filtering these water source can be costly as well as time consuming.

Economic and Ecological damage:

- Catastrophic wildfires takes a large economic toll on communities through property losses, decreased tourism, even changes in the long-term structure of the local economy.
- Building upon experience gained in evaluating economic impacts of forest fires in Florida, researchers will evaluate economic impacts of forest fires in the western U.S. insights gained

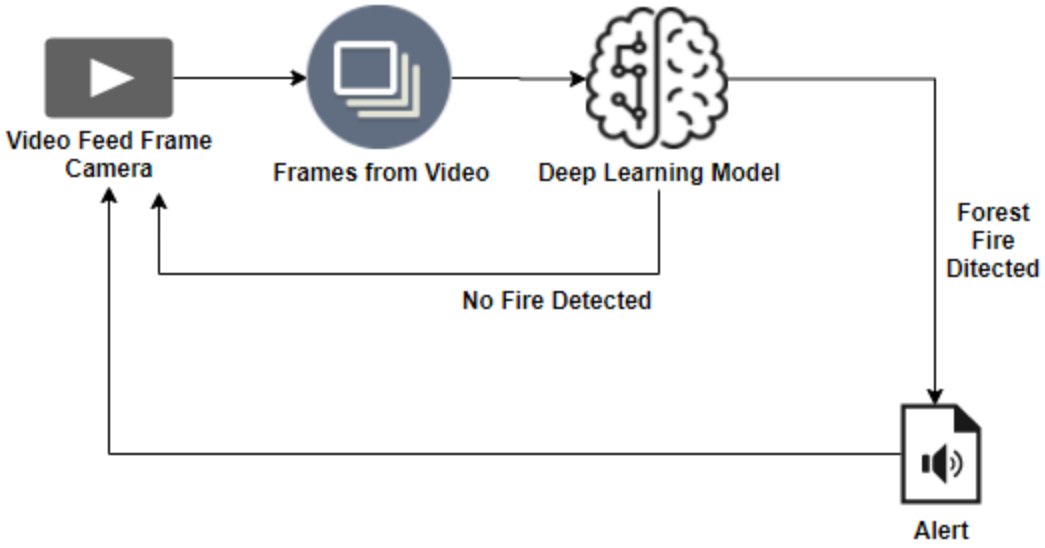
will help improve how we provide assistance in the aftermath of catastrophic fires.





Ecological damage:

- It plays a keys role in shaping ecosystems by serving as an agent of renewal and change.
- But fire can be deadly, destroying homes, wildlife habitat and timber, and polluting the air with emissions harmful to human health.



Metrological variable (driving factors)	Forest fire frequency Crammer's V coefficient (CVC)
Maximum temperature	0.4274
Number of rainy days	0.3550
Evapotranspiration	0.3227
Rainfall	0.7449

Attribute name	Description	Unit
FFMC	Fine Fuel Moisture Code	--
DMC	Duff Moisture Code	--
DC	Drought Code	--
ISI	Initial Spread Index	--
Temp	Temperature	^{o} C
RH	Relative Humidity	%
Wind	Wind speed	km/h
Rain	Rain volume	mm/m^2
Area	Total burned area	ha