FAIRPLANE

Emerging methods of early forest fire detection

SCENARIO	Entice	Enter	Engage	Exit	Extend
Emerging methods for early detection of forest fire	How does someone initially become aware of this process?	What do people experience as they begin the process?	In the core moments in the process, what happens?	What do people typically experience as the process finishes?	What happens after the experience is over?

Steps
What does the person (or group) typically experience?

Entice	Enter	Engage	Exit	Extend
Detect fire using image process; Is burning; Detect location; Send alert message; Automatic watering	Sent alert message to the fire officers; Receiving message about forest fire; Location will be identified; Reach to the fire environment; extinguishing the fire	Arrive at the location; Visiting the fire areas; Plan to avoid forest fire	Leave the place; Prompt for the forest fire; Writing & submitting reason	Detect through images; It will send notifications; Automatic water supply to the fire area; Precautions to avoid forest fire

Interactions
What interactions do they have at each step along the way?

- **People:** Who do they see or talk to?
- **Places:** Where are they?
- **Things:** What digital touchpoints or physical objects would they use?

Entice	Enter	Engage	Exit	Extend
Sent message through SMS; Use GSM for location; Fire can be detected by conveying sensor hubs; Wireless sensor to detect forest fire; Alarm to give warning	Import necessary packages; Download and load dataset and pre-processing the data	Satellite will transfer the information to the forest officer	Monitoring climate; Monitoring soil moisture; Monitoring the forest with the help of camera surveillance	It will notify to the forest officer; It will transmit to the base station; Then it will transfer to the earth station; After pre-processing, it will map the spatial extent of forest fire

Goals & motivations
At each step, what is a person's primary goal or motivation? ("Help me…" or "Help me avoid…")

Entice	Enter	Engage	Exit	Extend
It helps to avoid forest fire; Locations can be detected easily	It helps to control the forest fire	Satellites gather photographs and relay them to the monitoring; Monitoring weather and water stress	Fire detecting sensors GPS and GSM; Real fire alert and contact ground level teams	This model build by machine learning techniques; Satellite based remote sensing helps to detect forest fire

Positive moments
What steps does a typical person find enjoyable, productive, fun, motivating, delightful, or exciting?

Entice	Enter	Engage	Exit	Extend
Images and videos are inserted	Sensor has been used; Outperform the traditional methods such as naive bayes,SVM...	Installed and maintain alarm; Camera Surveillance; we have a satisfied accuracy	Satellite remote sensing is used for detecting and monitoring	

Negative moments
What steps does a typical person find frustrating, confusing, angering, costly, or time-consuming?

Entice	Enter	Engage	Exit	Extend
Loss of biodiversity; Extinction of plants and animals; Ozone layer Depletion	Health problems leading to diseases	Sometimes it will create an issue while predicting; It may give negative results when predicting	Even though we are using automatic water splashing; Report may fatigue; It disrupts transportation ,communication, power and water supply; Having nightmare, thoughts and about forest fire; It is horrific to watch	

Areas of opportunity
How might we make each step better? What ideas do we have? What have others suggested?

Entice	Enter	Engage	Exit	Extend
It helps to prevent forest fire; It will automatically splash water by using sensor; Make it easier to detect the forest fire; Provide a simpler summary to avoid forest fire; It helps to reach the area within few minutes		It makes easier and simple	It should have proper datasets; Conveying sensor hubs in the timberlands region; It will improve the accuracy progressively; It need sensor to detect the climate,location,etc.	It might help the people; How might we extend the accuracy?