Project Design Phase - 2
Data Flow Diagram and User Stories

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Team ID	PNT2022TMID34944
Project Name	Emerging Methods for Early Detection Of Forest Fire

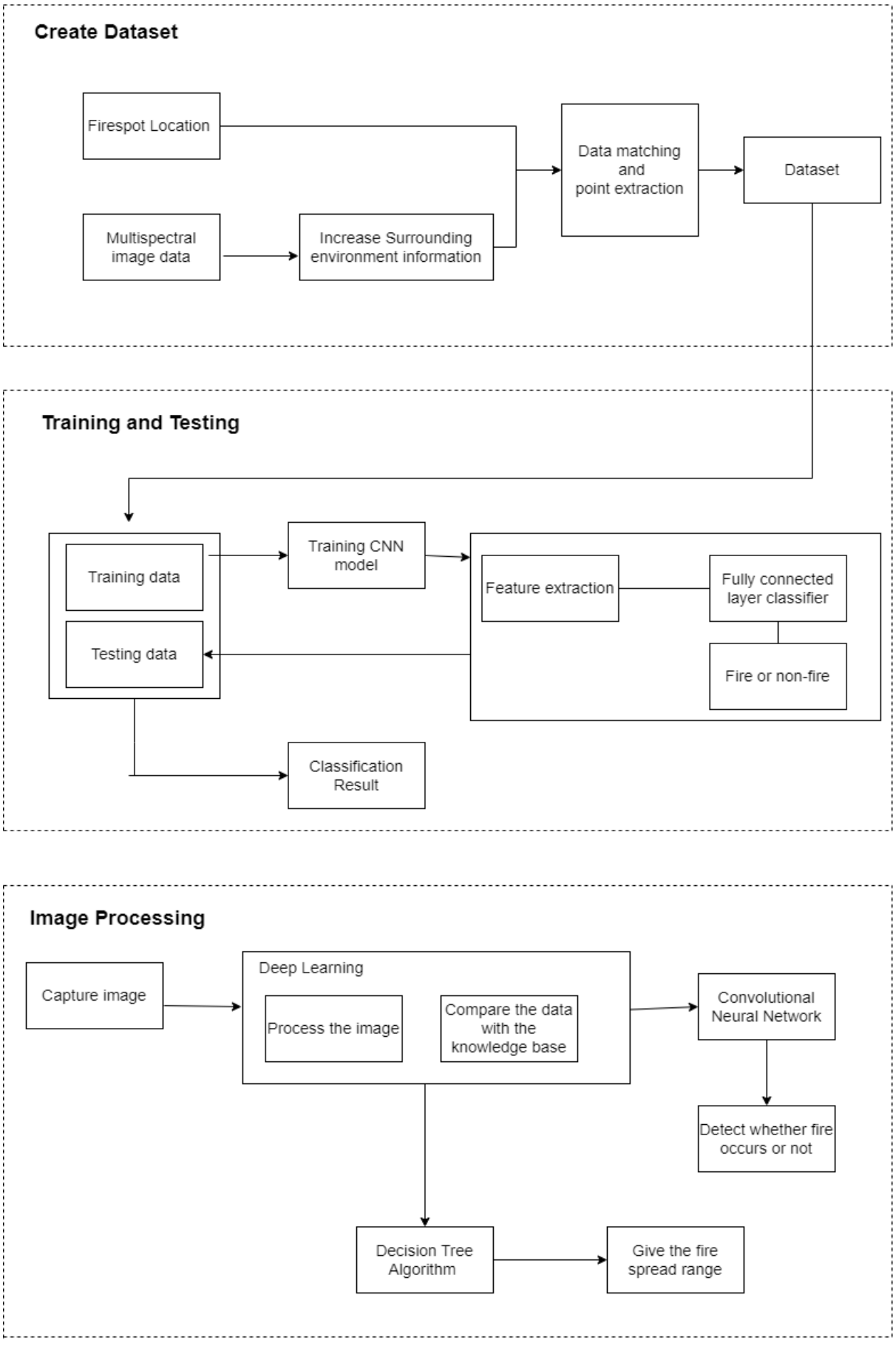
User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Customer (System)	Image Processing	USN-1	The system should process the image to identify the fire if it occurs.	It can able to process the image and detect the fire	High	Sprint 1
		USN-2	The information should be accurate and it would be given correctly as per the trained information in the knowledge base.	It would detect the fire using the data in the Knowledge base.	High	Sprint 1
	Video Processing	USN-3	The real information should be processed with the help of CNN to detect the fire	It is able to process the image.	High	Sprint 2
		USN-4	The video processing should also calculate the fire Spread range and give the real time data.	It would measure the Fire Spread range	High	Sprint 2
	Alerting	USN-5	After detecting the fire by the image processing technique, the alarm would be alerted.	It would alert the alarm	High	Sprint 3
	Location tracking	USN-6	The exact location of the fire occurrence should be alerted via the GPS	I am able to get the animals out of the forest.	High	Sprint 4
Customer (System in Fire Station	Sending Information	USN-7	The alarm alert would confirm the occurrence of fire	It should alert the alarm	High	Sprint 3
		USN-8	The exact location of fire and the fire spread range should be sent to the nearby Fire Station.	It should send the information	High	Sprint 3

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.


Create Dataset
Firespot Location
Multispectral image data
Increase Surrounding environment information
Data matching and point extraction
Dataset
Training and Testing
Training data
Testing data
Training CNN model
Feature extraction
Fully connected layer classifier
Fire or non-fire
Classification Result
Image Processing
Capture image
Deep Learning
Process the image
Compare the data with the knowledge base
Convolutional Neural Network
Detect whether fire occurs or not
Decision Tree Algorithm
Give the fire spread range