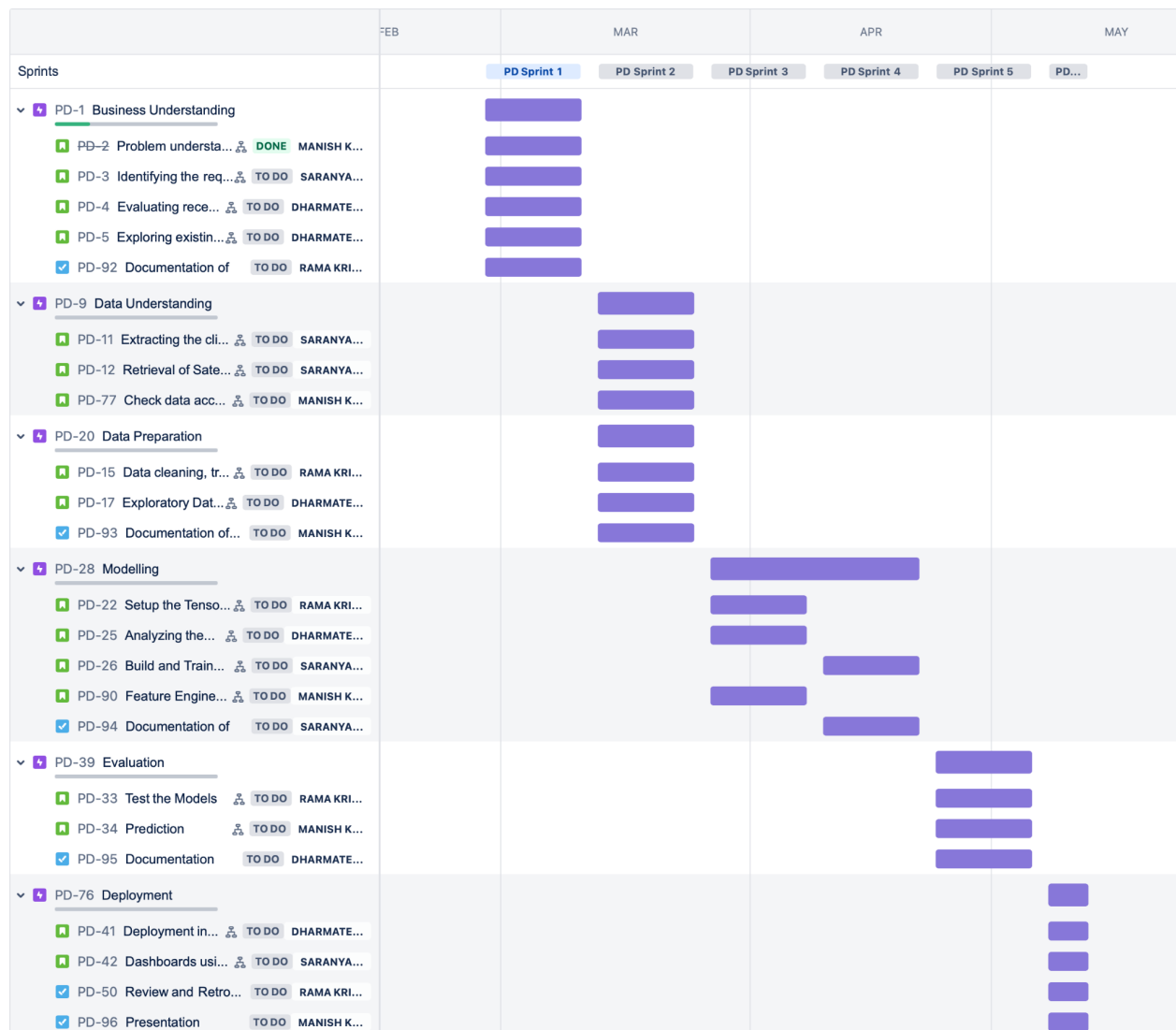Assignment 4:

Group - 1:

Saranya Gondeli - 016653858
Rama Krishna Poluru - 016190590
Dharma Teja Kolluri - 016190473
Manish kumar Sesetti - 016047733

1. For this project we are using the JIRA software project management tool. We have created the Epics, stories and tasks for the project. We have also created the sprints and have added the tasks to each sprint. We have created sprints for two weeks and one for one week.

2. In our project we are following the CRISP-DM methodology by creating tasks for each phase and creating phases as epics in the JIRA.

   Business understanding:
   We have added stories for understanding the problem and the requirements.
   Data Understanding:
   We have added stories for collecting the data from multiple sources and tasks for understating the data collected.
   Data preparation:
   We have created stories and tasks for cleaning the data and implementing the pre-processing methods on the data to prepare it for training the models that we will be creating.
   Modeling:
   We have created the stories and tasks for analyzing different models and building each model using the python libraries and the pre-processed data.
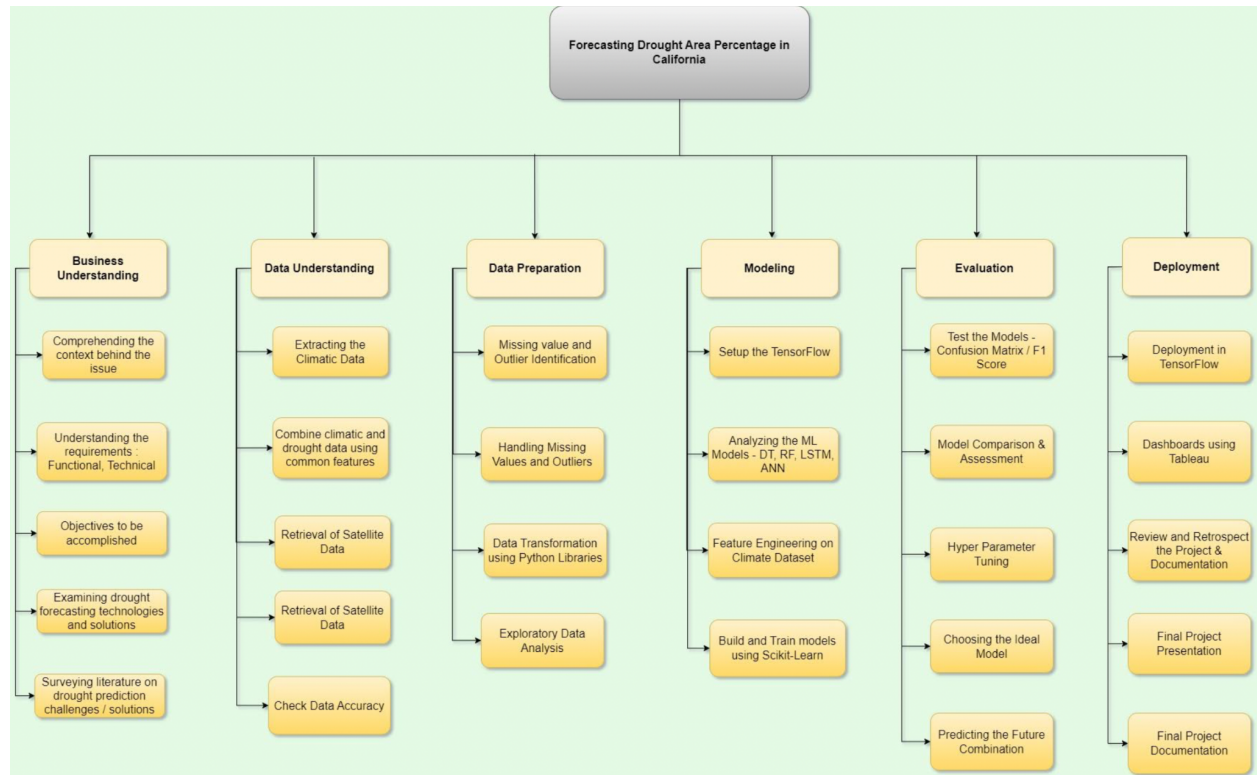   Evaluation:
   We have added stories and tasks for evaluating the models that we have created using the test datasets and seeing which model has the highest accuracy and select it for doing the predictions for the future combinations.
   Deployment:
   We have created stories and tasks for deploying the project models that are built on the TensorFlow serving application. And we have also added tasks for developing the dashboards on the tableau for the predicted data.

3. In WBS we have add the appropriate tasks that we are planning to do in this project and we have also mentioned the libraries that we are going to use for development and we have also mentioned the application that we planning to use for this project which is TensorFlow.

Forecasting Drought Area Percentage in California

Business Understanding	Data Understanding	Data Preparation	Modeling	Evaluation	Deployment
Comprehending the context behind the issue	Extracting the Climatic Data	Missing value and Outlier Identification	Setup the TensorFlow	Test the Models - Confusion Matrix / F1 Score	Deployment in TensorFlow
Understanding the requirements : Functional, Technical	Combine climatic and drought data using common features	Handling Missing Values and Outliers	Analyzing the ML Models - DT, RF, LSTM, ANN	Model Comparison & Assessment	Dashboards using Tableau
Objectives to be accomplished	Retrieval of Satellite Data	Data Transformation using Python Libraries	Feature Engineering on Climate Dataset	Hyper Parameter Tuning	Review and Retrospect the Project & Documentation
Examining drought forecasting technologies and solutions	Retrieval of Satellite Data	Exploratory Data Analysis	Build and Train models using Scikit-Learn	Choosing the Ideal Model	Final Project Presentation
Surveying literature on drought prediction challenges / solutions	Check Data Accuracy			Predicting the Future Combination	Final Project Documentation

4. Contribution of each team member:
    a. JIRA understanding - Ramakrishna, Dharma, Manish, Saranya
    b. Creating JIRA account - Saranya
    c. Task creation - Dharma, Saranya, Ramakrishna, Manish
    d. WBS - Dharma, Saranya, Ramakrishna, Manish.