**Python Library for Boosted Regression Tree**

1. XGBoost: XGBoost (eXtreme Gradient Boosting) is an open-source library that implements gradient boosting algorithms for regression and classification problems. It is widely used in Kaggle competitions and has a large community of users and contributors.

* Open Source

1. LightGBM: LightGBM is a gradient-boosting framework that uses tree-based learning algorithms. It is designed to be efficient, scalable, and particularly well-suited for large datasets.

* Open Source

1. CatBoost: CatBoost is a gradient-boosting library that is optimized for handling categorical variables. It uses an ensemble of decision trees to model the relationship between the input and target variables.

* Open Source

1. Sci-kit-learn: sci-kit-learn is a popular machine learning library that includes gradient boosting algorithms as part of its ensemble methods. The library provides a simple interface for building and tuning gradient-boosting models, making it a good choice for new users of machine learning.

**RF Model**

* The area ranges from 226 m to 718 m above sea level.
* The median value of elevation is 452 m, and
* The standard deviation (SD) is 331 m.
* slope angles range between 0 degrees and 46 degrees, with a mean of 23 degrees and an SD of 13 degrees.
* Approximately 50% of this zone has a slope gradient <10 degrees.
* watersheds with areas ranging from a minimum of 0.02 km^2 to a maximum of 12.64 km^2.
* mean annual precipitation = 556nm
* mean maximum temperature is 37 C, and the mean minimum temperature is approximately 7 C.
* The road consists of Cretaceous rock at the base, alternating marlstone-clay, and sandstone formations.
* The values of resistivity at this location lie at 6–1533 Ωm marking a large variation in soils and rocks.
* Elevation values range between 226 m and 718 m.

Geological data: soil and rock types, as well as slope angles and other geological features in the area. This information can help to determine the stability of the ground, the likelihood of soil erosion, and the potential for landslides to occur.

Meteorological data: This includes weather data such as rainfall, temperature, and humidity. Heavy rainfall can often trigger landslides, so this data is particularly important in landslide prediction models.

Hydrological data: This type of data provides information about water levels, water flow, and soil moisture. Landslides can be triggered by changes in soil moisture levels, so this data can help predict landslide risk.

Topographical data: This type of data includes information about the shape of the land, such as elevation, slope, and aspect. Topographical data can help identify areas that are more prone to landslides.

Historical landslide data: This type of data includes information about landslides that have occurred in the past.