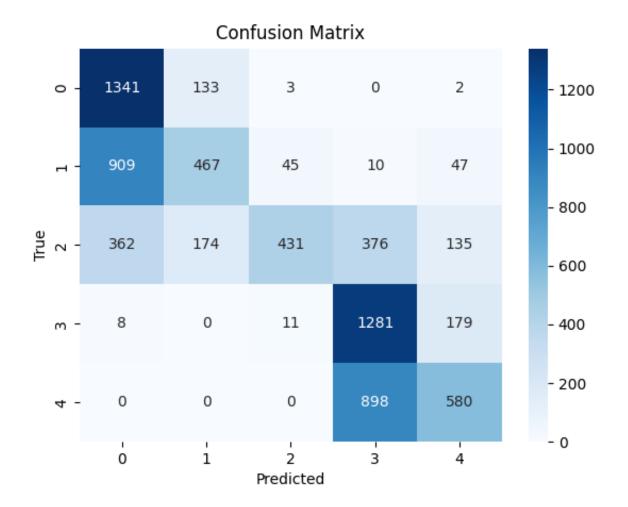
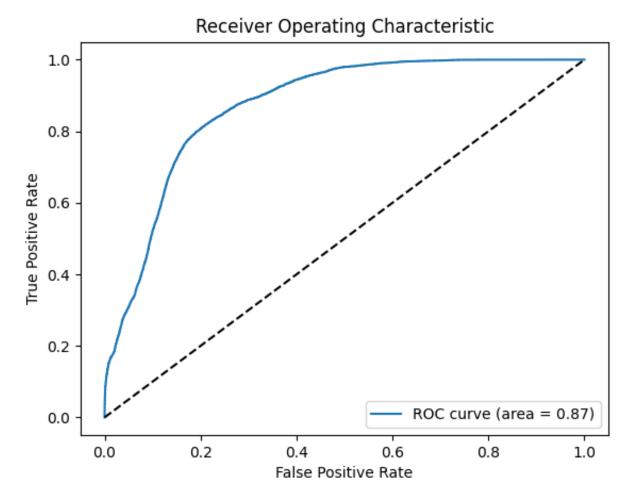
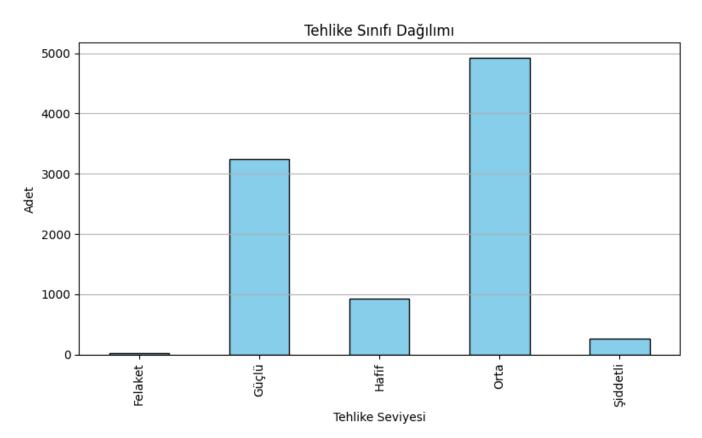
# **Earthquake Risk Analysis Report**

#### **Confusion Matrix / ROC Curve:**



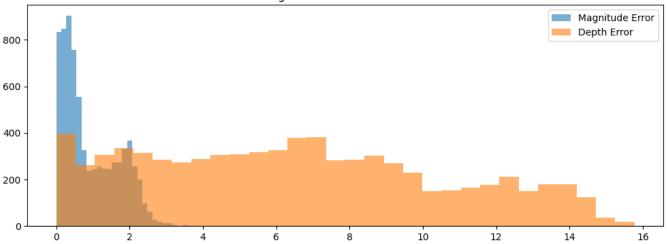


#### **Class Distribution:**



### **Regression Error Distribution:**

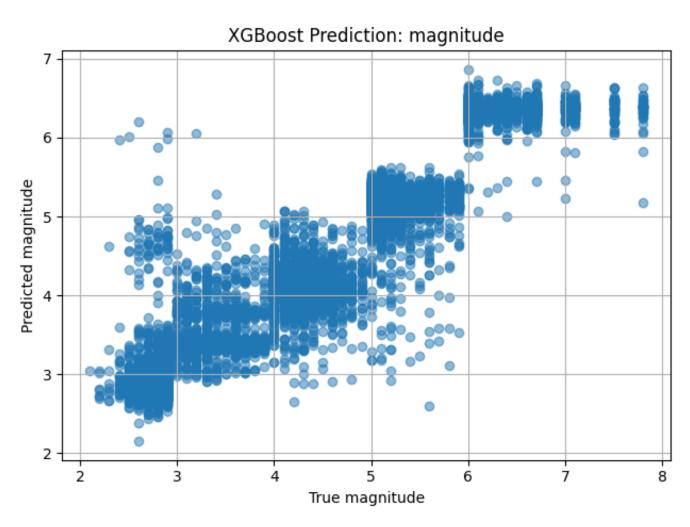




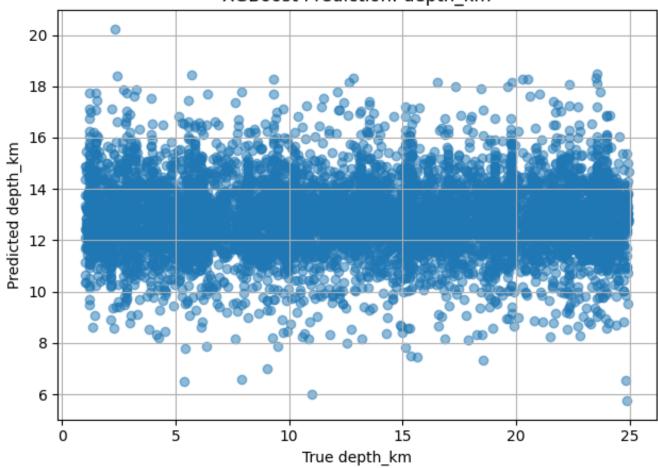
### Geographic Risk Map:

[Missing Image] data\geographic\_distribution.png

#### **XGBoost Results:**



### XGBoost Prediction: depth\_km



## **Prediction Summary Statistics:**

|       | feat_0  | feat_1  | feat_2  | feat_3  | feat_4  | feat_5  | feat_6  | feat_7  | feat_8  | feat_9  | feat_10 | true_class |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------|
| count | 7392.00 | 7392.00 | 7392.00 | 7392.00 | 7392.00 | 7392.00 | 7392.00 | 7392.00 | 7392.00 | 7392.00 | 7392.00 | 7392.00    |
| mean  | 0.02    | 1.11    | 0.07    | 0.22    | -0.12   | -0.06   | 0.26    | -0.05   | 0.59    | 0.21    | -0.17   | 2.00       |
| std   | 0.98    | 2.04    | 0.96    | 1.04    | 0.96    | 0.98    | 1.11    | 0.96    | 4.40    | 1.21    | 1.00    | 1.41       |
| min   | -1.70   | -3.12   | -1.63   | -0.92   | -1.52   | -1.42   | -1.25   | -0.81   | -0.02   | -0.91   | -3.08   | 0.00       |
| 25%   | -0.82   | -0.78   | -0.70   | -0.62   | -1.01   | -0.93   | -0.67   | -0.81   | -0.02   | -0.55   | -0.92   | 1.00       |
| 50%   | 0.03    | 0.88    | 0.17    | -0.25   | -0.16   | -0.04   | -0.23   | -0.81   | -0.02   | -0.22   | -0.08   | 2.00       |
| 75%   | 0.88    | 2.64    | 0.74    | 1.17    | 0.76    | 0.80    | 1.39    | 1.24    | 0.01    | 0.51    | 0.61    | 3.00       |
| max   | 1.74    | 6.35    | 2.51    | 2.76    | 1.61    | 1.53    | 2.24    | 1.24    | 87.87   | 7.74    | 2.51    | 4.00       |