

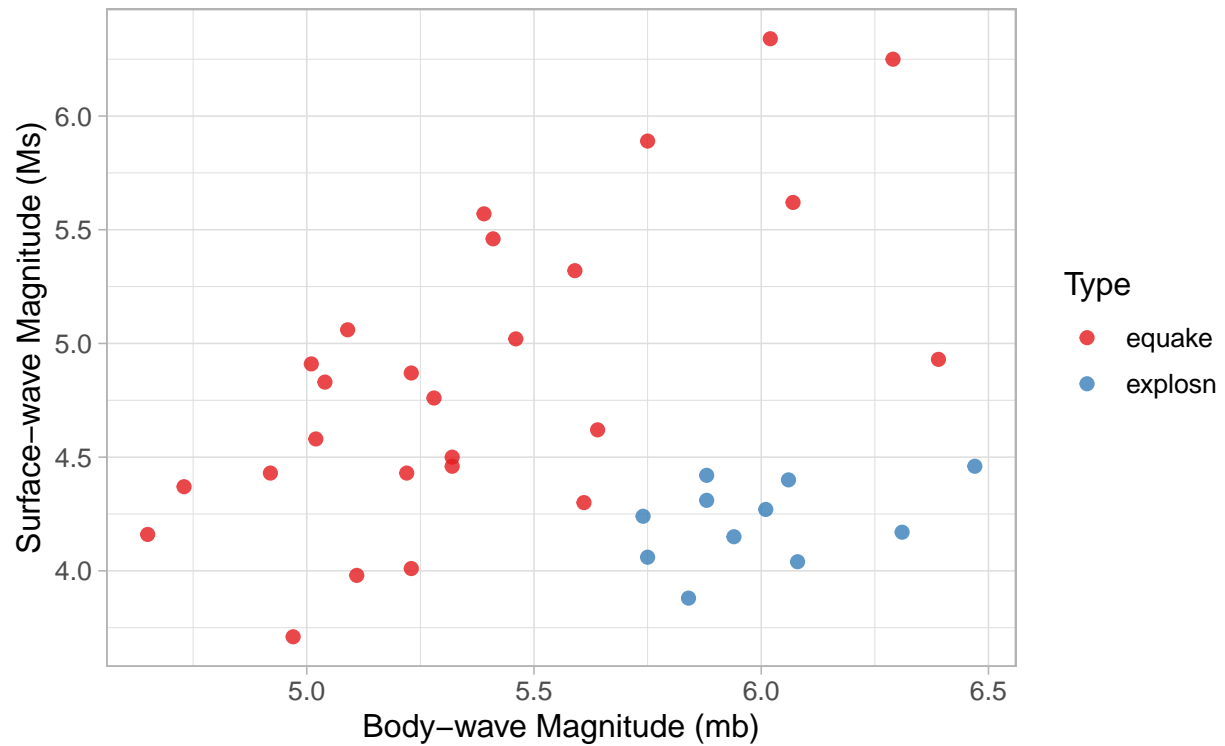
# Report\_10883408

10883408

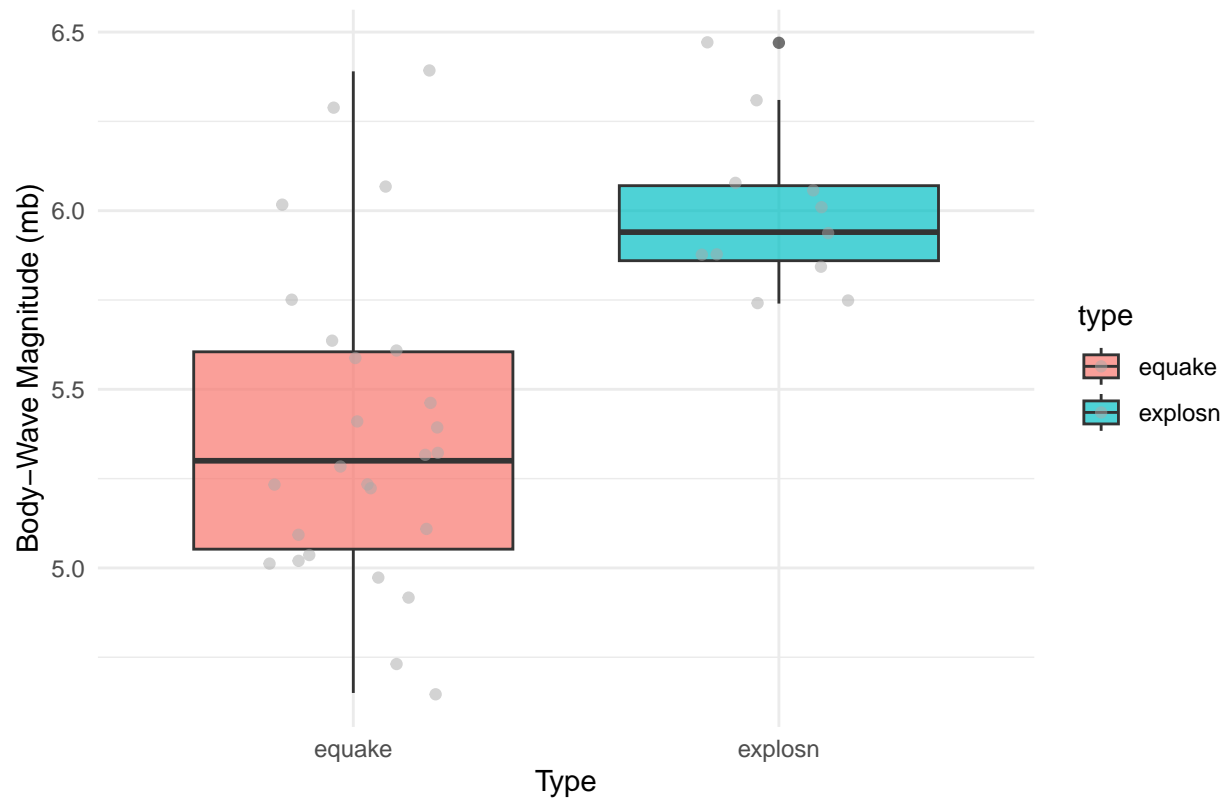
2024-04-08

## ML part A

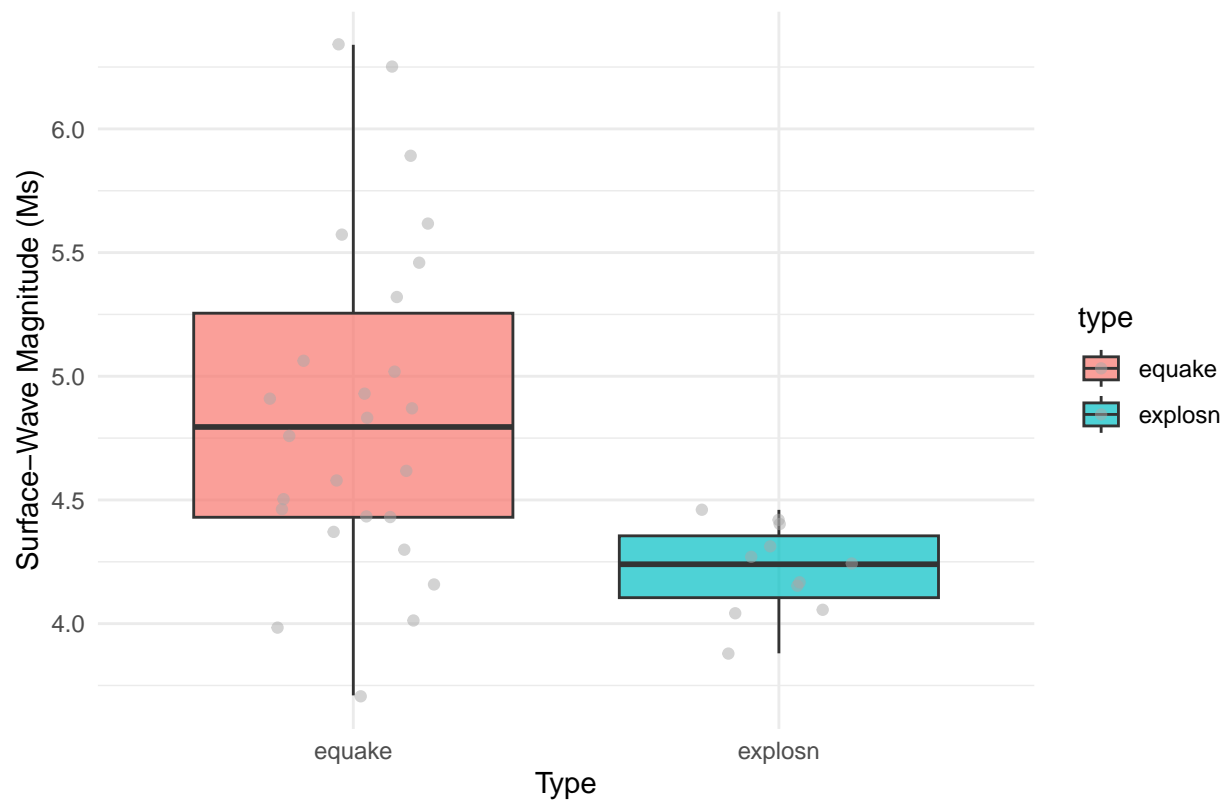
### Body-wave Magnitude vs. Surface-wave Magnitude Comparing earthquake types



Box Plot with Jitter of Body-Wave Magnitude by Type



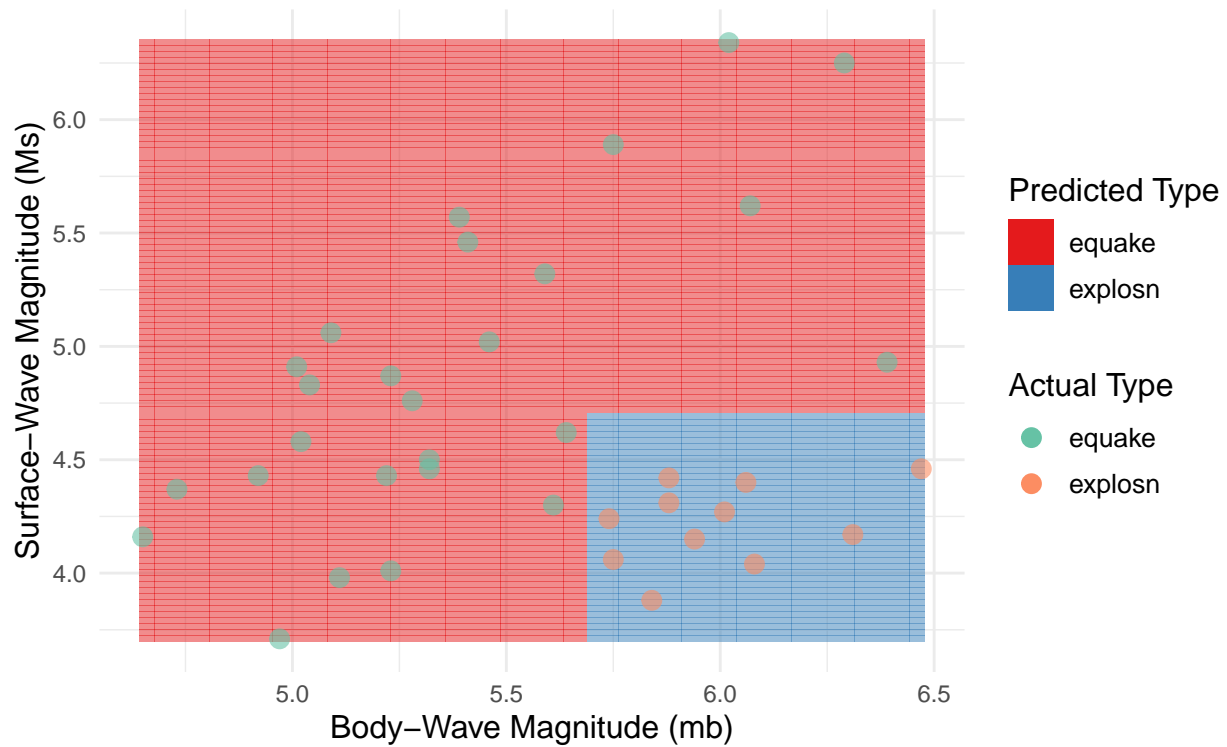
Box Plot with Jitter of Surface–Wave Magnitude by Type



## ML part B

### Earthquake vs. Nuclear Explosion Prediction

Random Forest Model Predictions vs. Actual Data



```
# Extract the Random Forest model from the caret object
rf <- rfModel$finalModel

# Error rate plot
plot(rf$err.rate[, "OOB"], type = "l", col = "red",
     xlab = "Number of Trees",
     ylab = "OOB Error Rate",
     main = "OOB Error Rate vs. Number of Trees")
```

**OOB Error Rate vs. Number of Trees**

