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1 Model Type 1

1.1 Inputs

- censustract
- $\bullet \ \ {\rm elevation difference}$
- ullet federalpolicyfee
- \bullet latitude
- \bullet longitude
- $\bullet \ \, number of floors in insured building$

With 40 trees (tested and performed better than 20 trees)

| Depth | r2 | MAE | MSE | rMSE |
|-------|---------------------|--------------------|--------------------|--------------------|
| 5 | 0.3114752982953377 | 231.46697672343765 | 1231114.2602807723 | 1109.5558842531423 |
| 6 | 0.3912370025083539 | 197.48394247735217 | 1163302.7993032774 | 1078.5651576531097 |
| 7 | 0.44489438413688076 | 177.04029713826296 | 1120098.3666343382 | 1058.3469972718485 |
| 8 | 0.4885592011558513 | 161.98952864311764 | 1079166.3562372378 | 1038.829320070067 |
| 9 | .5184725345488819 | 148.17988061047382 | 1048095.1108590999 | 1023.7651639214434 |
| 10 | 0.5419040769539529 | 138.31945617491704 | 1022605.0448560107 | 1011.2393608122711 |
| 11 | 0.5577762696204209 | 131.32631110401425 | 1004659.8326529753 | 1002.3272083770726 |
| 12 | 0.5703165962614429 | 126.2715559530854 | 992329.8370859065 | 996.1575362792305 |