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| **Year** | **Model Used** | **Dataset Used** | **Accuracy Achieved** | **Performance Metrics** | **Specifications (Epochs, Optimizers, etc.)** | **Additional Notes** |
| 2024 | Random Forest | Kaggle crime dataset | Random Forest: 94% | Temporal and spatial predictions | Data pre-processed, feature selection applied​(fin\_ijprems1715106998) | Emphasis on high-crime zones ("hot spots") |
| 2023 | Random Forest, KNN, Decision Tree, SVM, ANN | Dubai crime data (2014-2018) | Random Forest: 89%, KNN: 82%, SVM: 85%, ANN: 87% | Precision, recall, accuracy | 10-fold cross-validation, training on 70%, testing on 30%​(Paper\_18-Comparison\_of\_…) | Identified effective variables for prediction |
| 2023 | KNN, Decision Tree, SVM, XGBoost | Crime data from India | XGBoost: 93%, Random Forest: 91%, SVM: 88%, KNN: 86% | Accuracy, F1-score | Pre-processing: handling missing values, dimensionality reduction​(fin\_irjmets1701956358) | Used for resource allocation in high-crime areas |
| 2023 | KNN, Decision Tree, Linear Regression, Random Forest | Vancouver crime data | Random Forest: 90%, Decision Tree: 86%,  KNN: 84%, Linear Regression: 80% | Accuracy and trend analysis | Data pre-processed with label encoding, visualization with Matplotlib​(Article) | Visualization of crime patterns and trends |
| 2021 | Decision Tree, KNN, Random Forest | Chicago, San Francisco, LA, Northern Ireland crime data | Random Forest: 92%, Decision Tree: 88%, KNN: 85% | Model comparison based on test accuracy | Feature extraction with Decision Tree using Gini impurity​(Data\_mining\_technique\_t…) | Focused on high-frequency crimes like theft and assault |