1. Methodology

Results from different models.

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|  | Model | Hyperparameters | Results |
| 1. | SVM | Kernel=” rbf”, C=10, gamma=100 | 75.35% |
| 2. | RF | n\_estimators=100 | 72.18% |
| 3. | Gradient Boosting | Learning\_rate=0.05 | 56.92% |
| 4. | KNN | K=1 | 75% |
| 5. | Extra Tree Classifier | n\_estimators=100 | 69.21% |
| 6. | CNN |  |  |
| 7. | MLP | 8 hidden layers, dropout layers, activation function=”relu”, output layer=”SoftMax”, | 60.23% |
| 8. | **Proposed Solution:**  **Boosting (SVM+RF)** | **SVM- Kernel=” rbf”, C=10, gamma=100**  **RF- n\_estimators=100**  **Combining the probabilities using a weighted average to give the outcome.** | **81%** |

1. Methodology
2. Use of simple classification models on the combined dataset.
3. Further Analysis.
4. Bagging with SVM and RF and meta learning with RF.
5. Boosting with SVM and RF and combining probabilities by average.
6. Deep learning approaches
   1. MLP
   2. CNN
7. Results and Discussion
8. Results of the boosting approach on individual datasets.
9. Results on the combined datasets.