Comparison of Fake News Detection Models

# Title Only

## Naive Bayes

Accuracy: 0.94

### Classification Report:

precision recall f1-score support  
  
 0 0.90 0.98 0.94 96  
 1 0.98 0.89 0.93 104  
  
 accuracy 0.94 200  
 macro avg 0.94 0.94 0.93 200  
weighted avg 0.94 0.94 0.93 200

### Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | Predicted Fake | Predicted Real |
| Actual Fake | 94 | 2 |
| Actual Real | 11 | 93 |

## Logistic Regression

Accuracy: 0.99

### Classification Report:

precision recall f1-score support  
  
 0 0.98 1.00 0.99 96  
 1 1.00 0.98 0.99 104  
  
 accuracy 0.99 200  
 macro avg 0.99 0.99 0.99 200  
weighted avg 0.99 0.99 0.99 200

### Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | Predicted Fake | Predicted Real |
| Actual Fake | 96 | 0 |
| Actual Real | 2 | 102 |

## Random Forest

Accuracy: 1.00

### Classification Report:

precision recall f1-score support  
  
 0 1.00 1.00 1.00 96  
 1 1.00 1.00 1.00 104  
  
 accuracy 1.00 200  
 macro avg 1.00 1.00 1.00 200  
weighted avg 1.00 1.00 1.00 200

### Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | Predicted Fake | Predicted Real |
| Actual Fake | 96 | 0 |
| Actual Real | 0 | 104 |

# Description Only

## Naive Bayes

Accuracy: 0.98

### Classification Report:

precision recall f1-score support  
  
 0 0.96 1.00 0.98 96  
 1 1.00 0.96 0.98 104  
  
 accuracy 0.98 200  
 macro avg 0.98 0.98 0.98 200  
weighted avg 0.98 0.98 0.98 200

### Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | Predicted Fake | Predicted Real |
| Actual Fake | 96 | 0 |
| Actual Real | 4 | 100 |

## Logistic Regression

Accuracy: 1.00

### Classification Report:

precision recall f1-score support  
  
 0 1.00 1.00 1.00 96  
 1 1.00 1.00 1.00 104  
  
 accuracy 1.00 200  
 macro avg 1.00 1.00 1.00 200  
weighted avg 1.00 1.00 1.00 200

### Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | Predicted Fake | Predicted Real |
| Actual Fake | 96 | 0 |
| Actual Real | 0 | 104 |

## Random Forest

Accuracy: 1.00

### Classification Report:

precision recall f1-score support  
  
 0 1.00 1.00 1.00 96  
 1 1.00 1.00 1.00 104  
  
 accuracy 1.00 200  
 macro avg 1.00 1.00 1.00 200  
weighted avg 1.00 1.00 1.00 200

### Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | Predicted Fake | Predicted Real |
| Actual Fake | 96 | 0 |
| Actual Real | 0 | 104 |

# Title and Description

## Naive Bayes

Accuracy: 0.97

### Classification Report:

precision recall f1-score support  
  
 0 0.95 1.00 0.97 96  
 1 1.00 0.95 0.98 104  
  
 accuracy 0.97 200  
 macro avg 0.98 0.98 0.97 200  
weighted avg 0.98 0.97 0.98 200

### Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | Predicted Fake | Predicted Real |
| Actual Fake | 96 | 0 |
| Actual Real | 5 | 99 |

## Logistic Regression

Accuracy: 1.00

### Classification Report:

precision recall f1-score support  
  
 0 1.00 1.00 1.00 96  
 1 1.00 1.00 1.00 104  
  
 accuracy 1.00 200  
 macro avg 1.00 1.00 1.00 200  
weighted avg 1.00 1.00 1.00 200

### Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | Predicted Fake | Predicted Real |
| Actual Fake | 96 | 0 |
| Actual Real | 0 | 104 |

## Random Forest

Accuracy: 1.00

### Classification Report:

precision recall f1-score support  
  
 0 1.00 1.00 1.00 96  
 1 1.00 1.00 1.00 104  
  
 accuracy 1.00 200  
 macro avg 1.00 1.00 1.00 200  
weighted avg 1.00 1.00 1.00 200

### Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | Predicted Fake | Predicted Real |
| Actual Fake | 96 | 0 |
| Actual Real | 0 | 104 |