**Table 1 – Multiclass Accuracy of Different Models**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Accuracy | Precision | Recall | F1 |
| **No Pre-Processing** |  |  |  |  |
| SVM - Linear | 0.235 | 0.227 | **0.225** | **0.225** |
| SVM - Polynomial | **0.253** | **0.405** | 0.216 | 0.183 |
| Multinomial NB | 0.243 | 0.206 | 0.209 | 0.195 |
| Decision Tree | 0.224 | 0.249 | 0.194 | 0.163 |
| **Text Pre-Processing** |  |  |  |  |
| SVM – Linear | 0.231 | 0.223 | **0.221** | **0.223** |
| SVM – Polynomial | 0.242 | **0.428** | 0.204 | 0.173 |
| Multinomial NB | **0.246** | 0.266 | 0.215 | 0.205 |
| Decision Tree | 0.210 | 0.229 | 0.189 | 0.153 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Table 2 – Ablation Table for Preprocessed Text**  *(Accuracy of Multiclass Models)*   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | Linear SVM | Poly SVM | Multinomial NB | DT | | Just Text | 0.231 | **0.242** | 0.246 | 0.210 | | Just Subject | 0.214 | 0.211 | 0.204 | 0.207 | | Just Speaker | 0.215 | 0.235 | 0.211 | 0.231 | | Just Political Party | 0.222 | 0.222 | 0.217 | 0.223 | | Text + Subject | 0.239 | 0.192 | 0.251 | 0.231 | | Text + All | **0.244** | 0.225 | **0.256** | **0.239** | |  |  |  |

**Table 3 – Mutual Information**

|  |  |  |
| --- | --- | --- |
|  | Top Values | Max MIC |
| Text | would cut, compens, almost, item, Toomey, billion, import, proven, ben, say | 0.022 |
| Speaker | ami, newsmax, rooney, ahern, gavin, disease, burnt, olson, sarah, leeder | **0.027** |
| Subject | energy, prices, transportation, islam, lottery, drugs, justice, military, regulation, occupy | **0.027** |
| Political Party | body, business, liberal, moderate, democrat, activist, show, state, talk, farmer | 0.024 |