|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Macro f1 | LR | SVM | CNN | BiLSTM | Ours |
| BOW(1-gram) | 0.35 | 0.55 |  |  |  |
| BOW(2-gram) | 0.33 | 0.57 |  |  |  |
| BOW(3-gram) | 0.34 | 0.57 |  |  |  |
| One-hot | 0.47 | 0.45 | 0.46 | 0.50 |  |
| BERT | 0.53 | 0.61 | 0.62 | 0.54 | 0.74 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Micro f1 | LR | SVM | CNN | BiLSTM | Ours |
| BOW(1-gram) | 0.45 |  |  |  |  |
| BOW(2-gram) | 0.44 |  |  |  |  |
| BOW(3-gram) | 0.45 |  |  |  |  |
| One-hot | 0.47 | 0.45 | 0.46 | 0.55 |  |
| BERT | 0.51 | 0.57 | 0.59 | 0.65 | 0.76 |

|  |  |  |  |
| --- | --- | --- | --- |
| Macro f1 | Res+Des | Res | 下降程度 |
| LR | 0.52 | 0.53 | -0.01 |
| SVM | 0.67 | 0.61 | 0.06 |
| CNN | 0.71 | 0.62 | 0.09 |
| BiLSTM | 0.74 | 0.54 | 0.2 |
| Ours | 0.78 | 0.74 | 0.04 |

|  |  |  |  |
| --- | --- | --- | --- |
| Micro f1 | Res+Des | Res | 下降程度 |
| LR | 0.57 | 0.51 | 0.06 |
| SVM | 0.68 | 0.57 | 0.11 |
| CNN | 0.75 | 0.59 | 0.16 |
| BiLSTM | 0.77 | 0.65 | 0.12 |
| Ours | 0.82 | 0.76 | 0.06 |