









of prediction. Based on this phenomenon, we chose LDA model, which is both well-performed and stable, to do feature selection and got the result as shown in Table 6.

**Table 6. Feature Selection based on LDA model**

| Run | Composition         | AvgCosin      | AvgAbsLoss    |
|-----|---------------------|---------------|---------------|
| 4   | baseline            | 0.8812        | 0.1380        |
| 5   | baseline+f7         | 0.8825        | 0.1343        |
| 6   | baseline+f7+f20     | 0.8831        | 0.1339        |
| 7   | baseline+f7+f14     | 0.8841        | 0.1335        |
| 8   | baseline+f7+f14+f13 | <b>0.8886</b> | <b>0.1286</b> |

## 6. CONCLUSIONS

This paper details the approach DUT-CH group addressed for Temporalia task at the NTCIR-12. We participate in TID subtask (Chinese) aiming at predicting the distribution of four temporal intents. For TID Chinese subtask, the formal run results were produced by adopting all the designed features to linear SVC model, Logistic Regression model with *l1* penalty and Random Forest model with class weight balanced. After the submission of the formal run, we did further experiments to compare different models and feature composition and finally got a better and more stable result by LDA model and selected time gap, word-based probability distribution vector, temporal trigger word, Google Trends' time gap, center word and its Part-of-speech as good features.

In the future work, we will exploit more implicit features by analyzing time-series data, Google Trends and the documents returned by search engines like Google Search and Baidu Search.

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