

An Approach for the Chinese Question-answer System based on Document

Benyou Wang¹, Jiabing Niu¹, Liqun Ma¹, Lipeng Zhang¹, Yuhua Zhang¹, and Peng Zhang¹

Tianjin Key Laboratory of Cognitive Computing and Application, School of Computer Science and Technology, Tianjin University, Tianjin, China

Abstract. Question Answering system has gradually become a new trend within the field of information retrieval and NLP. It outperforms the conventional search engines, for the system is able to answer users questions automatically and accurately. Question Answering system based on English corpus has developed rapidly, whereas the Chinese corpus based Question Answering system still has some problems remains to be solved. Thus, developing a new Question Answering model, which is characterized by dealing with features of Chinese corpus is extremely essential. Different to the current deep learning model, our model uses the semantic and syntactic information in Chinese corpus and bases on the linearity of Chinese texts. Finally, our model turns out to perform better than other methods through experiments...

Keywords: Question Answer, graph theory, Hamilton cycles

1 Introduction

2

just test a cite[1]

3 Methods

3.1 Data Exploration

3.2 Data Exploration

Word Overlap and Character Overlap It is considered that the more keywords in questions are matched with those in the answer sentences, the more likely that the answer is the correct one. We have found that there are some relationships between the overlapped characters or words and the occurrence frequency of the correct answer after analysing the given corpus.

Position Message in Overlapped Words

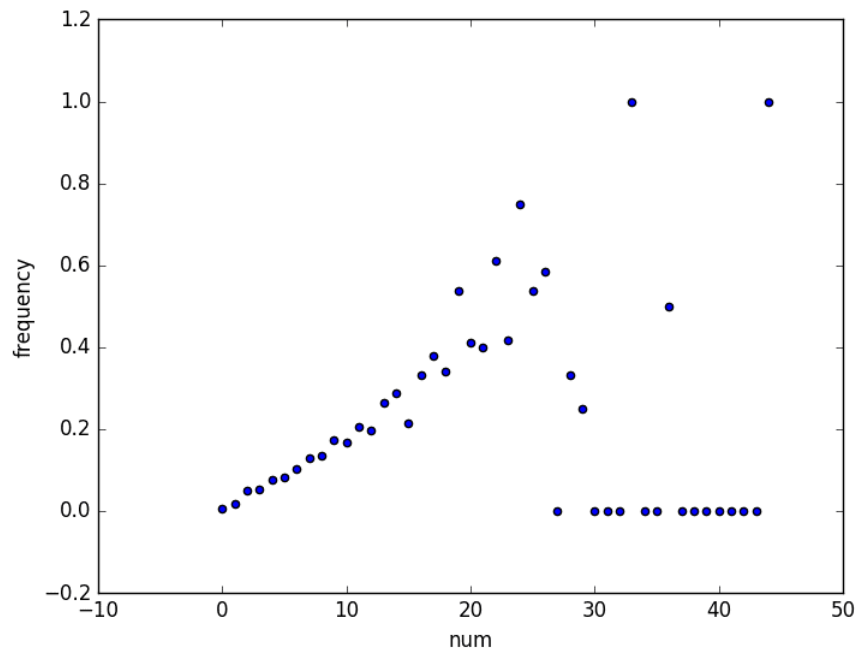


Fig. 1. This is the caption of the figure displaying a white eagle and a white horse on a snow field

Word Overlap and Character Overlap

3.3 Data Preprocessing

3.4 Feature Extraction

Questions and Answers Type

Overlap

Other Conventional Methods

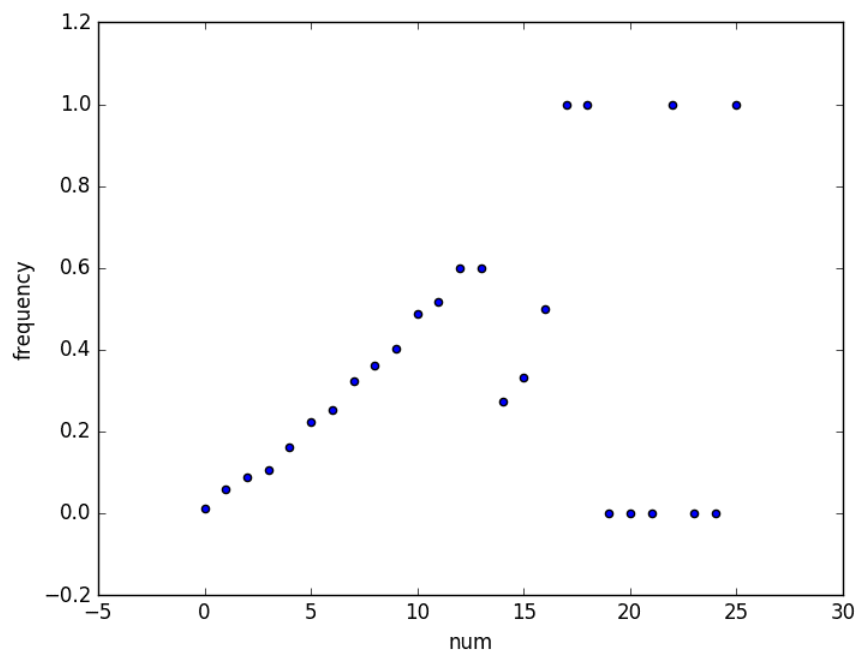


Fig. 2. This is the caption of the figure displaying a white eagle and a white horse on a snow field

Embedding

3.5 Model Selection

4 Experimental results

5 Discussion and Conclusion

References

1. A. Severyn and A. Moschitti, “Learning to rank short text pairs with convolutional deep neural networks,” in *Proceedings of the 38th International ACM SIGIR Conference on Research and Development in Information Retrieval*. ACM, 2015, pp. 373–382.

Subject Index

- Absorption 327
- Absorption of radiation 289–292, 299, 300
- Actinides 244
- Aharonov-Bohm effect 142–146
- Angular momentum 101–112
 - algebraic treatment 391–396
- Angular momentum addition 185–193
- Angular momentum commutation relations 101
- Angular momentum quantization 9–10, 104–106
- Angular momentum states 107, 321, 391–396
- Antiquark 83
- α -rays 101–103
- Atomic theory 8–10, 219–249, 327
- Average value
(*see also* Expectation value) 15–16, 25, 34, 37, 357
- Baker-Hausdorff formula 23
- Balmer formula 8
- Balmer series 125
- Baryon 220, 224
- Basis 98
- Basis system 164, 376
- Bell inequality 379–381, 382
- Bessel functions 201, 313, 337
 - spherical 304–306, 309, 313–314, 322
- Bound state 73–74, 78–79, 116–118, 202, 267, 273, 306, 348, 351
- Boundary conditions 59, 70
- Bra 159
- Breit-Wigner formula 80, 84, 332
- Brillouin-Wigner perturbation theory 203
- Cathode rays 8
- Causality 357–359
- Center-of-mass frame 232, 274, 338
- Central potential 113–135, 303–314
- Centrifugal potential 115–116, 323
- Characteristic function 33
- Clebsch-Gordan coefficients 191–193
- Cold emission 88
- Combination principle, Ritz's 124
- Commutation relations 27, 44, 353, 391
- Commutator 21–22, 27, 44, 344
- Compatibility of measurements 99
- Complete orthonormal set 31, 40, 160, 360
- Complete orthonormal system, *see*
- Complete orthonormal set
- Complete set of observables, *see* Complete set of operators
- Eigenfunction 34, 46, 344–346
 - radial 321
 - calculation 322–324
- EPR argument 377–378
- Exchange term 228, 231, 237, 241, 268, 272
- f -sum rule 302
- Fermi energy 223
- H_2^+ molecule 26
- Half-life 65
- Holzwarth energies 68