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| **Inventory of supplemental materials** | | | |
| **File name** | **Specific content** | | **Corresponding parts in the manuscript** |
| Table S1 | The CEE-EKB containing 134 documents | The CEE knowledge framework with 18 second-level and 59 third-level knowledge sub-domains | Section 3.1 (Fig. 2) |
| The CEE-EKB containing 134 documents | Section 3.1 (Fig. 2) |
| Experts for identifying the knowledge framework of CEE-KG | Section 3.1 (Fig. 2) |
| Table S2 | The CEE-QA test question set containing 2921 questions | The CEE-QA test question set containing 2921 questions | Section 3.2 (Fig. 5) |
| Experts for formulating the 1881 questions | Section 3.2 (Fig. 5) |
| Table S3 | The 52578 answers to 2921 questions from 9 LLMs before and after the CEE knowledge integration | | Sections 4.1, 4.2, and 4.3 |
| Video S1 | Video clip of running original LLMs | | Section 3.3 |
| Video S2 | Video clip of running CEE knowledge-incorporated LLMs | | Section 3.3 |
| Video S3 | Video clip of running CEE-QA prototype | | Section 5.2 |
| CEE-KG | CEE-KG (JSON format).json | | Section 3.1 |
| CEE-KG (neo4j-readable format).dump | | Section 3.1 |
| CEE-KG (FAISS format).faiss | | Section 3.3 |
| Codes | Codes for running original LLMs | Codes for original Baichuan2-7b | Section 3.3 |
| Codes for original Baichuan2-13b | Section 3.3 |
| Codes for original ChatGLM3-6b | Section 3.3 |
| Codes for original GPT-3.5-turbo and GPT-4 | Section 3.3 |
| Codes for original Llama-2-13b、ERNIE-Bot-turbo、ERNIE-Bot-turbo4.0 and Qianfan-Chinese-Llama-2-7B | Section 3.3 |
| Codes for running CEE knowledge-incorporated LLMs | Codes for running CEE knowledge-incorporated Baichuan2-7b | Section 3.3 |
| Codes for running CEE knowledge-incorporated Baichuan2-13b | Section 3.3 |
| Codes for running CEE knowledge-incorporated ChatGLM3-6b | Section 3.3 |
| Codes for running CEE knowledge-incorporated GPT-3.5-turbo and GPT-4 | Section 3.3 |
| Codes for running CEE knowledge-incorporated Llama-2-13b、ERNIE-Bot-turbo、ERNIE-Bot-turbo4.0 and Qianfan-Chinese-Llama-2-7B | Section 3.3 |
| Codes for deploying and running the CEE-QA prototype | | Section 5.2 |

Due to too many materials, all supplemental materials are provided in the GitHub repository (<https://github.com/Orange-1212/QA-for-CEE>). Besides the GitHub repository, the CEE-QA test question set is shared in the Hugging Face repository (<https://huggingface.co/datasets/Cxh1212/QA_test_question_set_for_CEE>).