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Paired-Prompts: Guiding LLM to Make Better Dialogue Summarization in Parameter-Efficient Fine-Tuning 1884
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Optimizing NLP Model Deployment: A Comparative Analysis of Fine-tuning, Few-shot Learning, and Prompt Engineering Strategies 1892
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A GNN-Based Enhanced Learning Framework for Node Classification in Radar Fault Knowledge Graphs 1904
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Construction of knowledge graph of glass defects 1911
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Name Entity Recognition of E-commerce Product Reviews Based on BERT 1915
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An Intelligent-Aware Transformer with Domain Adaptation and Contextual Reasoning for Question Answering 1920
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Robust and Fair Prompt Attribution via Banzhaf Value in Large Language Models 1925
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Enhanced Attention-based Self-Supervised Co-Training for Session-based Recommendation 1932
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Text-Guided Dual Feature Enhancement: A Training-Free Paradigm for Few-Shot Learning with CLIP 1937
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KEMTC: Knowledge-Enhanced Multilingual Text Correction with Large Language Model 1941
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Mechanical Property Prediction of Materials via a Literature Mining Approach 1945
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Improving Harmful Text Detection with Joint Retrieval and External Knowledge 1950
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KET-GPT: A Modular Framework for Precision Knowledge Updates in Pretrained Language Models 1955
Shihao Zhao, Zhejun Zhao, Junchen Liu, Tianyuan Deng, Jiayun Zheng, Hanlu Zhang

Fine-Grained Question-Concept Difficulty Calibration for Knowledge Tracing 1960
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Enhancing Multi-Turn Dialogue Generation with MoE-Based Multi-Latent Variable Fusion 1965
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Document Information Extraction in Engineering Reports through Prompt Engineering with Large Language Models 1969
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Knowledge Mapping Analysis of Domestic and International Cybersecurity Research 1973
Yang Yang, Yukai Chen

ChatWeaver: Interactive Knowledge Graph for Efficient Information Retrieval and Visualization Empowered by LLM 1978
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Assembly Process Information Model of Electrical Cabinets Based on Knowledge Graph 1983
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Knowledge-Driven Prediction of Vulnerability Co-Exploitation 1987
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PathCap: A Contrastive Learning Approach for Automatic Pathology Report Generation in Liver Cancer Diagnosis 1994
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Research on Domain Agent Based on Event Element Extraction 1999
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A financial text sentiment analysis method combining self-supervised learning 2005
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Achieving Professional Translation in The Military Field Through Fine-tuning LLM 2010
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