

第二讲：英文学术论文之写作思路

——立意和标题

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课程主页：<https://mmlab-iie.github.io/course/>

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从科学问题是否探究本质说起

CCF—A

科学问题 聚焦领域前沿，探索本质问题

解决方法 着重核心挑战，具普适性方法

Mucko: Multi-Layer Cross-Modal Knowledge Reasoning for Fact-based Visual Question Answering

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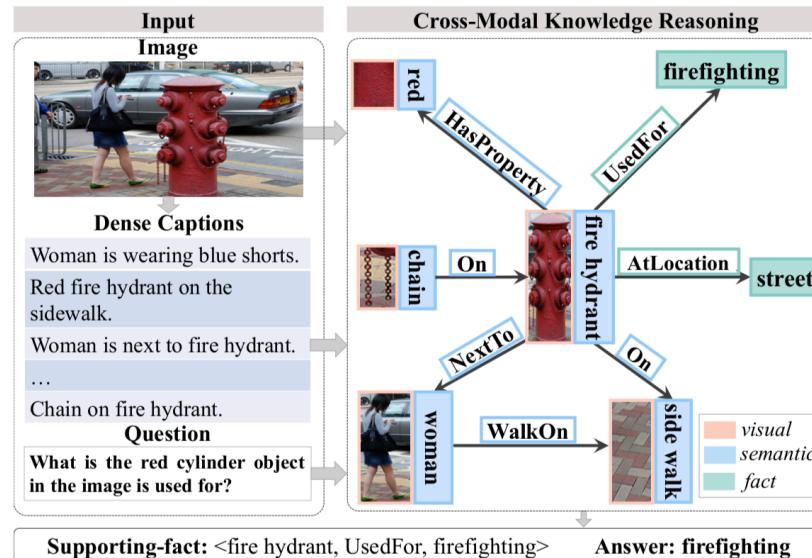
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IJCAI 2020



CCF—C

追逐领域热点，解决表面问题

盲从热门方法，模型增量修改

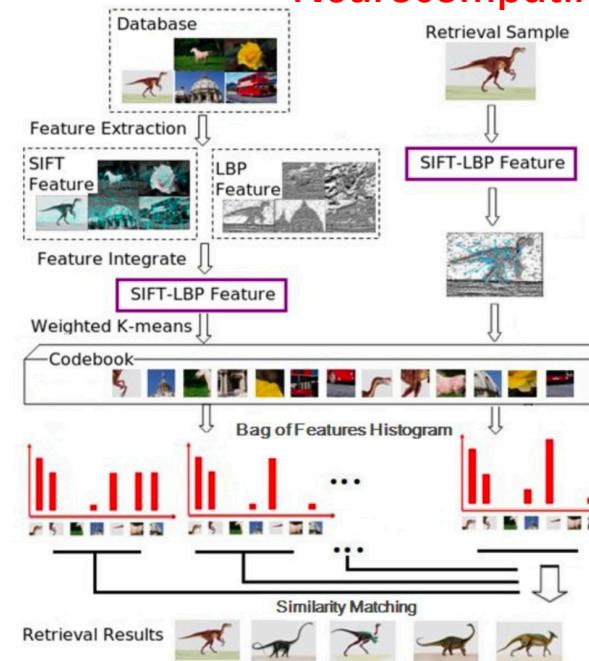
Feature integration analysis of bag-of-features model for image retrieval

Jing Yu^a, Zengchang Qin^{a,*}, Tao Wan^b, Xi Zhang^a

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^b School of Medicine, Boston University, Boston, USA

Neurocomputing 2011



从科学问题是否探究本质说起

CCF—A

- 问题-方法-实验，相互呼应

- 问题：有理有据，足够具体

- 方法：针对问题设计，每一步设计目标明确

- 实验：针对方法逐一证明，针对动机逐一分析

CCF—C

- 问题-方法-实验，各为其说

- 问题：大家都在研究，所以我研究

- 方法： $step1 \rightarrow step2 \rightarrow step3$

- 实验：达到了SOTA，缺乏分析



一篇论文的组成

- ◆ 标题：核心问题与创新点的高度凝练
- ◆ 摘要：动机、亮点与效果的概要介绍
- ◆ 引言：动机、现状、方法和贡献介绍
- ◆ 相关工作：引言现有工作的详细介绍
- ◆ 研究方法：引言模型部分的详细介绍
- ◆ 实验分析：引言模型效果的详细介绍
- ◆ 总结展望：经过实验验证后给的结论
- ◆ 致谢：对作者以外人员/机构的感谢
- ◆ 参考文献：正文出现的按照格式引用

一篇论文的组成——标题

基本要求（不超过15个单词）

☀ 英文形式规范

☀ 语言精炼简洁

☀ 范围大小适当

好标题

☀ 反应核心问题

☀ 突出技术创新

☀ 保护知识产权

☀ 易于记忆传播



一篇论文的组成——标题 (Bad Cases)

From shallow to deeper: compositional reasoning over graphs for visual question answering

太宽泛!

PERT: adaptive Evidence-driven Reasoning network for Machine Reading Comprehension with Unanswerable Questions

不规范!

Understanding like humans: multimodal representation for the visual information in visual dialog

没依据!

Graph Neural Networks for Image-Text Matching

没创新!

A Plug-and-Play novel Tree Loss Function for Unbiased Scene Graph Generation based on Upgraded Transformer framework

太冗余!

KBGN: Knowledge-Bridge Graph Network for Adaptive Vision-Text Reasoning in Visual Dialogue.

难记忆!

一篇论文的组成——标题 (My Own)

MuKEA: Multimodal Knowledge Extraction and Accumulation for Knowledge-based Visual Question Answering (CVPR 2022)

ET-BERT: A Contextualized Datagram Representation with Pre-training Transformers for Encrypted Traffic Classification (WWW 2022)

CogTree: Cognition Tree Loss for Unbiased Scene Graph Generation (IJCAI 2021)

DualDV: An Adaptive Dual Encoding Model for Visual Dialogue (AAAI 2020)

Mucko: Multi-Layer Cross-Modal Knowledge Reasoning for Fact-based Visual Question Answering (JICAI 2020)

DAM: Deliberation, Abandon and Memory Networks for Generating Detailed and Non-repetitive Responses in Visual Dialogue (JICAI 2020)



一篇论文的组成——标题 (CV & NLP & ML)

Zero-Shot Text-to-Image Generation
(DALL·E, arxiv 2021)

Swin Transformer: Hierarchical Vision Transformer using Shifted Windows (ICCV 2021)

Sketch, Ground, and Refine: Top-Down Dense Video Captioning (CVPR 2021)

BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding
(NAACL 2019)

Knowledgeable Prompt-tuning : Incorporating Knowledge into Prompt Verbalizer for
Text Classification (ACL 2022)

Semi-Supervised Classification with Graph Convolutional Networks (ICLR 2017)

A Simple Framework for Contrastive Learning of Visual Representations
(SimCLR, 2020 ICML)

欢迎大家在B站、知乎专栏、邮件留言交流！

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研究组主页: <https://mmlab-iie.github.io/>

知乎专栏: https://www.zhihu.com/column/c_1284803871596797952

课程主页



研究组主页



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