欧阳坤

山东大学 | 人工智能

基本信息

男　19岁　汉族　共青团员

电话/微信：17870368164　　邮箱：kunouyang10@gmail.com

山东大学 - 计算机科学与技术学院 – 人工智能（2020-2024）

个人简述

乐观自信、自律刻苦的大三本科生，数理基础扎实，学习能力强，有优秀的竞赛成果和丰富的科研经历。

- **均分 92.03/100**
- **专业排名 2/52**

荣誉奖项

山东大学学业一等奖学金，小松中日奖学金，华为奖学金，特长奖学金（研究创新，社会实践)等

科研经历

- **山东大学ilearn实验室 多模态方向**　　*2021.12 至今*

师从计算机学院宋雪萌副教授，从事自然语言处理和跨模态方面的研究。

多模态讽刺解释　　*2022.09 -2023.01*

任务定义：给定从社媒收集到的讽刺性帖子(包含图片和配文)，需要为其生成一个自然语言语句来解释其讽刺语义。

主要工作：我们提出的模型从输入图像中提取出对象级语义元数据而非传统的全局视觉特征，同时借助外部知识库获取输入文本和提取的对象元数据的外部相关知识概念，之后我们构建了多源语义图，全面表征多源(标题，对象元数据，外部知识)语义关系来推进讽刺解释生成。

我的贡献：我负责编写代码实现模型的架构，并在数据集MORE上进行比较我们模型和其他基线方法的实验，以及消融实验。在工作初期，我研究了使用ConceptNet的可行性，它是一个大规模的知识图谱，可以提供常识知识和情感词汇知识。此外，我还研究了多源语义图的构建。

投递会议：ACL2023(CCF-A)

项目经历

- **[排名前7%,共两万多支参赛队伍]MCM2022一等奖**　　*2022.02-2022.02*

我们设计了一个动态决策模型，模型包含三部分：1.交易价格预测；2.投资组合评估；3.投资最优决策。解决了如何根据以往的黄金和比特币价格来进行买入或卖出的投资决策问题。

- **[排名前4.85%,共三千多支参赛队伍]第十届“泰迪杯”数据挖掘挑战赛全国三等奖**　　*2022.05-2022.06*

在YOLOV5模型的基础上，采用TensorRT加速模型推理，采用裁剪、旋转、混合等数据增强方法提高模型的泛化能力，实现了对害虫的多尺度目标检测。

- **[排名第七]ECV徘徊检测**　　*2022.10-2022.12*

以Yolov7为基础模型，使用了TensorRT加速，以ByteTrack为跟踪器，并进行模型剪枝，解决了对徘徊人员进行跟踪并发出警报的问题。最终榜单排名为7

兴趣爱好

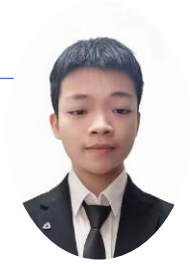
爱好足球，音乐，美食。

语言与技能

语言：**CET-4：618　　CET-6：527**

编程能力：CSP 240(前10%)**.** 掌握编程语言：C++/python

Kun Ouyang



Information

Male Age 19

Tel/WeChat：178-7036-8164 E-mail：kunouyang10@gmail.com

Shandong University(SDU) (2020-2024)

School of Computer Science and Technology – Artificial Intelligence

Weighted average **92.03/100**, GPA: **4.20/5**, ranking **2/52 (3.8%).**

Profile

Optimistic, confident, self-disciplined and hardworking 3rd year undergraduates with a solid foundation in mathematics, strong learning ability, excellent competition results and rich research experience.

Honors

First-class Scholarship, Huawei Scholarship, Komatsu China-Japan Scholarship, Specialty Scholarship (Research and Innovation, Social practice) and several awards in sports/arts, *etc.*

Research

- **Research Assistant, Intelligent Media Research Center(iLearn), Shandong university.** **12/2021-now**

Studying under Associate Professor Xuemeng Song.

- **Multimodal Sarcasm Explanation** **09/2022-01/2023**

Task definition: Given a multimodal social post(an image as well as its caption), we aim to generate a natural language sentence to explain why it contains the sarcasm.

Our work: We propose a novel mulTi-source sEmantic graph-based Multimodal sarcasm explanation scheme, named TEAM. TEAM extracts the object-level semantic meta-data instead of the traditional global visual features from the input image. Meanwhile, TEAM resorts to the ConceptNet to obtain the external related knowledge for the input text and the extracted object meta-data. Thereafter, TEAM introduces a multi-source semantic graph that comprehensively characterize the multi-source(*i.e.,* caption, object meta-data, external knowledge) for facilitate the sarcasm explanation.

My contribution: I am responsible for writing code to implement the model architecture and conduct the experiment of TEAM comparison with other baselines on the dataset MORE, ablation experiment as well. Early in the work, I investigated the feasibility of using ConceptNet- a big scale knowledge graph, which can provide commonsense knowledge and emotional lexical knowledge. In addition I also investigated the construction of multi-source semantic graph.

Conference: ACL2023(under review) CCF-A.

Projects

- **[Top 7% 20K+teams] Meritorious Winner in American Mathematical Contest in Modelling (MCM)**

02/2022-02/2022

We design a dynamic decision model, which consists of three parts: 1. Transaction price prediction module; 2. Portfolio evaluation module; 3. Optimal investment decision module. We solve the problem of how to make trading decisions based on past gold and bitcoin prices.

- **[Top 4.85% 3K+teams] National Third prize in Teddy Cup Data Mining Challenge** **05/2022-06/2022**

Based on the YOLOV5 model, TensorRT is used to accelerate model reasoning, and data enhancement methods such as cropping, rotation and mixup are used to improve the generalization ability of the model, thus realizing multi-scale target detection of pests.

- **[Top 7] ECV Wadering Detection** **10/2022-12/2022**

We used Yolov7 as the base model, TensorRT acceleration, ByteTrack as the tracker, and model pruning to solve the problem of tracking and alerting wandering people.

Skills

English proficiency：**CET-4: 618** **CET-6: 527**

Programing skill: [Top 10%] 240 points in CSP(Certified Software Professional). Good at python/C++.