Xiaohan Zou

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EDUCATION

Boston University, Boston, MA, USA   09/2021 – 01/2023 (Expected)
M.S. in Computer Science

Tongji University, Shanghai, China   09/2016 – 07/2020
B.Eng. in Software Engineering

PUBLICATIONS AND SUBMITTED MANUSCRIPTS

○ **Xiaohan Zou**, Changqiao Wu, Lele Cheng, and Zhongyuan Wang. "Rethinking Fine-grained Semantic Alignment in Video-Text Retrieval", **submitted to IJCAI 2022**.

○ **Xiaohan Zou**, Cheng Lin, Yinjia Zhang, and Qinpei Zhao. "To be an Artist: Automatic Generation on Food Image Aesthetic Captioning", **ICTAI 2020**. (Acceptance Rate: 25%, **Oral Presentation**) [Paper] [Code]

○ **Xiaohan Zou**. "A Survey on Application of Knowledge Graph", **CCEAI 2020**. [Paper]

PROFESSIONAL EXPERIENCE

Machine Learning Engineer Intern, Kuaishou Technology, Beijing, China   07/2021 – Present

○ Devised a new model-agnostic formulation for fine-grained cross-modal semantic alignment and subsumed the recent popular works into the proposed scheme

○ Proposed a video-text retrieval method which is competitive when compared with the SOTA approaches with heavy model design by only altering the similarity function, **submitted to IJCAI 2021**

○ Developed a PyTorch library for video-text retrieval which is benefiting our group members' research work

PROJECTS

Product Description Generation, Champion of Deecamp 2021 Language Track 06/2021 – 08/2021

○ Incorporated product attributes, personalized information and external knowledge to T5 pre-trained model using transformer and bidirectional attention to generate interesting and informative product descriptions

○ Developed a fancy cross-platform website for interacting with our model using Vue and uni-app

Food Image Aesthetic Captioning, Tongji University, Link   04/2020 – 06/2020

○ Proposed a novel framework consisting of a single-attribute captioning module and an unsupervised text summarization module for generating aesthetic captions for food images, **published in ICTAI**

○ Designed a data filtering strategy inspired by TF-IDF method for building a dataset for this new task

○ Designed two new evaluation criteria to assess the novelty and diversity of the generated captions

○ Outperformed baselines and existed methods substantially in terms of diversity, novelty and coherence

Semi-Supervised Machine Translation, Peking University   07/2018 – 08/2018

○ Utilized the structure duality to boost the learning of two dual tasks based on shared hidden space

○ Designed two denoising auto-encoders consisting of encoders and decoders of two traditional Seq2Seq neural machine translators to make use of unpaired data

○ Outperformed strong baselines by 1.0 - 2.9 BLEU on IWSLT'15 and WMT'14 dataset

AWARDS AND HONORS

Bronze, China Collegiate Programming Contest (CCPC)   2018
Second Prize, China Mathematical Contest in Modeling (CUMCM)   2017, 2018

SKILLS

Programming Languages: Python, JavaScript/TypeScript, HTML/CSS, Java, C/C++, MATLAB
Tools and Frameworks: Git, PyTorch, Keras, scikit-learn, Linux, Vue, React, Django, LaTeX
Languages: Chinese (native), English (proficient, TOEFL: 106, GRE: 322)