

# XIAOHAN ZOU

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## EDUCATION

<b>Boston University</b>	Boston, MA
M.S. in Computer Science	09/2021 – 01/2023
<b>Tongji University</b>	Shanghai, China
B.Eng. in Software Engineering	09/2016 – 07/2020

## PUBLICATIONS AND SUBMITTED MANUSCRIPTS

- **Xiaohan Zou**, and Tong Lin. "Efficient Meta-Learning for Continual Learning with Taylor Expansion Approximation", **submitted to IJCNN 2022**.
- **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]

## RESEARCH EXPERIENCE

<b>Machine Learning Engineer Intern</b> , Kuaishou Technology, Beijing	07/2021 – Present
<ul style="list-style-type: none"><li>○ Devised a new model-agnostic formulation for fine-grained cross-modal semantic alignment and subsumed the recent popular works into the proposed scheme</li><li>○ 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, <b>submitted to IJCAI 2022</b></li><li>○ Developed a PyTorch library for video-text retrieval which is benefiting the group members' research work</li></ul>	
<b>Research Intern</b> , Peking University, Beijing (Advisor: <a href="#">Prof. Tong Lin</a> )	08/2020 – Present
<ul style="list-style-type: none"><li>○ Designed an efficient method for parameter importance estimation via Taylor expansion</li><li>○ Proposed a fast meta-learning algorithm for continual learning problems, which expresses the gradient of meta-update in closed-form instead of using Hessian information, <b>submitted to IJCNN 2022</b></li><li>○ Outperformed SOTA methods while optimizing much more efficient in experiments on popular benchmarks</li></ul>	
<b>Research Assistant</b> , Tongji University, Shanghai (Advisor: <a href="#">Prof. Qinpei Zhao</a> )	03/2020 – 06/2020
<ul style="list-style-type: none"><li>○ Proposed a novel framework consisting of a single-attribute captioning module and an unsupervised text summarization module for generating aesthetic captions for food images, <b>published in ICTAI 2020</b> [Project]</li><li>○ Designed a data filtering strategy inspired by TF-IDF method for building a <a href="#">dataset</a> for this new task</li><li>○ Designed two new evaluation criteria to assess the novelty and diversity of the generated captions</li><li>○ Outperformed baselines and existed methods substantially in terms of diversity, novelty and coherence</li></ul>	
<b>Research Intern</b> , Peking University, Beijing (Advisor: <a href="#">Prof. Tong Lin</a> )	07/2018 – 08/2018
<ul style="list-style-type: none"><li>○ Utilized the structure duality to boost the learning of two dual tasks based on shared hidden space</li><li>○ Designed two denoising auto-encoders consisting of encoders and decoders of two traditional Seq2Seq neural machine translators to make use of unpaired data</li><li>○ Outperformed strong baselines by 1.0 - 2.9 BLEU on IWSLT'15 and WMT'14 dataset</li></ul>	

## AWARDS AND HONORS

<b>Bronze</b> , China Collegiate Programming Contest (CCPC)	2018
<b>Second Prize</b> , 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,  $\text{\LaTeX}$   
**Languages:** Chinese (native), English (proficient, TOEFL: 106, GRE: 322)