

# **Yunlong Tang**

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## **Education**

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|---|---|
| <b>University of Rochester</b><br><i>Ph.D. Student in Computer Science, advised by Prof. Chenliang Xu</i>   | Aug. 2023 – Jun. 2028 (Expected)<br>Rochester, NY, US |
| <b>Southern University of Science and Technology (SUSTech)</b><br><i>B.Eng. in Intelligence Science and Technology, advised by Prof. Feng Zheng</i> | Aug. 2019 – Jun. 2023<br>Shenzhen, China              |

## **Professional Experience**

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| <b>SUSTech VIP Lab</b><br><i>Undergraduate Student Researcher, supervised by Prof. Feng Zheng</i>  | Aug. 2022 – Jul. 2023<br>Shenzhen, China  |
| <ul style="list-style-type: none"><li>• Participated in the Generic Event Boundary Captioning competition at CVPR 2023 Long-form Video Understanding Workshop, proposed and developed the LLMVA-GEBC model [2] that won the championship.</li><li>• Proposed LaunchpadGPT, which aims to utilize a language model to generate music visualization in the form of Launchpad displaying video. Results [4] accepted to International Computer Music Conference (ICMC), 2023.</li><li>• Collaborated on the Caption-Anything project, contributed to the segmentation module for supporting interactive visual prompts, and involved in the technical report [3] writing.</li></ul> |   |
| <b>Tencent</b><br><i>Research Intern, supervised by Ms. Qin Lin and Dr. Wenhao Jiang</i>   | Sept. 2021 - Aug. 2022<br>Shenzhen, China |
| <ul style="list-style-type: none"><li>• Proposed and developed multi-modal segment assemblage network (M-SAN) and importance-coherence reward for training. The method improves efficiency and accuracy compared to current automatic advertisement video editing techniques. Results [5] accepted to ACCV 2022.</li><li>• Deployed the model in Tencent servers online to perform efficient and accurate ad video editing, and filed the patent <i>An Approach for Automatic Ad Video Editing</i>.</li></ul>  |   |

## **Research Publications**

- 1 **Y. Tang**, J. Bi, S. Xu, L. Song, S. Liang, T. Wang, D. Zhang, J. An, J. Lin, R. Zhu, et al., “Video Understanding with Large Language Models: A Survey,” *arXiv preprint arXiv:2312.17432*, 2023.
- 2 **Y. Tang**, J. Zhang, X. Wang, T. Wang, and F. Zheng, “LLMVA-GEBC: Large Language Model with Video Adapter for Generic Event Boundary Captioning,” *arXiv preprint arXiv:2306.10354*, 2023.
- 3 T. Wang, J. Zhang, J. Fei, H. Zheng, **Y. Tang**, Z. Li, M. Gao, and S. Zhao, “Caption anything: Interactive Image Description with Diverse Multimodal Controls,” *arXiv preprint arXiv:2305.02677*, 2023.
- 4 S. Xu, **Y. Tang**, and F. Zheng, “LaunchpadGPT: Language Model as Music Visualization Designer on Launchpad,” *arXiv preprint arXiv:2307.04827*, 2023.
- 5 **Y. Tang**, S. Xu, T. Wang, Q. Lin, Q. Lu, and F. Zheng, “Multi-modal Segment Assemblage Network for Ad Video Editing with Importance-Coherence Reward,” in *Proceedings of the Asian Conference on Computer Vision (ACCV)*, Dec. 2022, pp. 3519–3535.

# Academic Service

Joural Reviewer  IEEE Transactions on Multimedia (TMM)

## Skills

- Languages  English (fluent), Mandarin Chinese (native).
- Coding  Python, C++, Java, MATLAB, L<sup>A</sup>T<sub>E</sub>X.
- Web Dev  HTML, CSS, JavaScript.
- Misc.  PyTorch, Hugging Face, OpenCV, FFmpeg, LangChain.

## Miscellaneous Experience

### Teaching Assistant

- 2023  **Spring CS308 Computer Vision**, SUSTech.  
*Instructor: Prof. Feng Zheng.*
- 2022  **Fall CS308 Computer Vision**, SUSTech.  
*Instructor: Prof. Feng Zheng.*

### Certification

- 2021  **Certified in Machine Learning, Modeling, and Simulation Principles** from Massachusetts Institute of Technology (MIT). Credential ID: [5ed6ad60-3f98-4009-b342-95bdae56fef5](#).

### Awards and Achievements

- 2023  **The First Place** in Generic Event Boundary Captioning Track of **LOVEU** (Long-form Video Understanding) Challenge at CVPR 2023 Workshop.
-  **Excellent Graduate for Exceptional Performance**, SUSTech.
-  **Excellent Undergraduate Thesis**, Department of Computer Science and Engineering, SUSTech.
- 2022  **The First Class of Merit Student Scholarship for Exceptional Performance**, SUSTech.
- 2021  **Research Innovation Award**, Shude College, SUSTech.

## On-going Projects

-  **Audio-Visual LLM for Fine-grained Video Understanding:** aiming to enhance the fine-grained audio-visual video understanding capabilities of audio-visual LLMs through pseudo temporal boundary alignment.
-  **Blind Assistant Agent for Online Video Accessibility:** aiming to generate multimodal and comprehensive video descriptions to improve online video accessibility for individuals who are blind or have low vision.
-  **Instruction-tuning for Cross-modal Video Summarization:** focusing on fine-tuning Vid-LLM with instructions and interleaved video-text prompts to adeptly handle both video-to-video and video-to-text summarization tasks.