Junfei Xiao

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Education

Johns Hopkins University **2022 -**
Ph.D. in ***Computer Science*** *Baltimore, Maryland*

Johns Hopkins University **Sep. 2019 – May 2021**
M.S.E in ***Computer Science, GPA: 4.0/4.0*** *Baltimore, Maryland*

Beihang University **Sep. 2015 – June 2019**
B.E. in ***Mechanical Engineering****, Double Degree in* ***Mathematics, GPA: 3.8/4.0 (Top 2%)*** *Beijing, China*

Experience

Tiktok (Seed Video Generation Team) **May 2024 – Now**
Research Intern *San Jose, California*

Google Research **July 2023 – Feb. 2024**
Student Researcher *Mountain View, California*

CCVL Lab, Johns Hopkins University **Sep. 2021 – Present**
Research Assistant*, Advisor:* ***Alan Yuille*** *Baltimore, Maryland*

CCVL Lab, Johns Hopkins University **June 2020 – Sep. 2021**
Research Intern*, Advisor:* ***Alan Yuille*** *Baltimore, Maryland*

Publications and Manuscripts

[16] **Junfei Xiao**, Feng Cheng, Lu Qi, Liangke Gui, Jiepeng Cen, Zhibei Ma, Alan Yuille, and Lu Jiang. "Towards Long Narrative Video Generation". In: *arXiv preprint arXiv:2501.06173* (2024).

[15] Taiming Lu*, Tianmin Shu*, **Junfei Xiao***, Luoxin Ye, Jiahao Wang, Cheng Peng, Chen Wei, Daniel Khashabi, Rama Chellappa, Alan Yuille, and Jieneng Chen (*: Core Contributors). "GenEx: Generating an Explorable World". In: *arXiv preprint arXiv:2412.09624* (2024).

[14] Xianhang Li, Haoqin Tu, Mude Hui, Zeyu Wang, Bingchen Zhao, **Junfei Xiao**, Sucheng Ren, Jieru Mei, Qing Liu, Huangjie Zheng, et al. "What If We Recaption Billions of Web Images with LLaMA-3?" In: *arXiv preprint arXiv:2406.08478* (2024).

[13] **Junfei Xiao**, Zheng Xu, Alan Yuille, Shen Yan, and Boyu Wang. "PaLM2-VAdapter: Progressively Aligned Language Model Makes a Strong Vision-language Adapter". In: *arXiv preprint arXiv:2402.10896* (2024).

[12] **Junfei Xiao**, Ziqi Zhou, Wenxuan Li, Shiyi Lan, Jieru Mei, Zhiding Yu, Alan Yuille, Yuyin Zhou, and Cihang Xie. "A Semantic Space is Worth 256 Language Descriptions: Make Stronger Segmentation Models with Descriptive Properties". In: *European Conference on Computer Vision (ECCV)* (2024).

[11] Xianhang Li, Haoqin Tu, Mude Hui, Zeyu Wang, Bingchen Zhao, **Junfei Xiao**, Sucheng Ren, Jieru Mei, Qing Liu, Huangjie Zheng, et al. "What If We Recaption Billions of Web Images with LLaMA-3?" In: *arXiv preprint arXiv:2406.08478* (2024).

[10] Sucheng Ren, Xiaoke Huang, Xianhang Li, **Junfei Xiao**, Jieru Mei, Zeyu Wang, Alan Yuille, and Yuyin Zhou. "Medical Vision Generalist: Unifying Medical Imaging Tasks in Context". In: *arXiv preprint arXiv:2406.05565* (2024).

[9] Sucheng Ren, Zeyu Wang, Hongru Zhu, **Junfei Xiao**, Alan Yuille, and Cihang Xie. "Rejuvenating image-GPT as Strong Visual Representation Learners". In: *International Conference on Machine Learning (ICML)* (2024).

[8] Jie Liu, Yixiao Zhang, Jie-Neng Chen, **Junfei Xiao**, Yongyi Lu, Bennett A Landman, Yixuan Yuan, Alan Yuille, Yucheng Tang, and Zongwei Zhou. "Clip-driven universal model for organ segmentation and tumor detection". In: *International Conference on Computer Vision (ICCV)* (2023).

[7] Qixin Hu, Yixiong Chen, **Junfei Xiao**, Shuwen Sun, Jie-Neng Chen, Alan Yuille, and Zongwei Zhou. "Label-Free Liver Tumor Segmentation". In: *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)* (2023).

[6] Yutong Bai, Zeyu Wang, **Junfei Xiao**, Chen Wei, Huiyu Wang, Alan Yuille, Yuyin Zhou, and Cihang Xie. "Masked Autoencoders Enable Efficient Knowledge Distillers". In: *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)* (2023).

[5] **Junfei Xiao**, Yutong Bai, Alan Yuille, and Zongwei Zhou. "Delving into Masked Autoencoders for Multi-Label Thorax Disease Classification". In: *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*. 2023.

[4] Qixin Hu, **Junfei Xiao**, Yixiong Chen, Shuwen Sun, Jie-Neng Chen, Alan Yuille, and Zongwei Zhou. "Synthetic Tumors Make AI Segment Tumors Better". In: *NeurIPS Workshop* (2022).

[3] **Junfei Xiao**, Lequan Yu, Zongwei Zhou, Yutong Bai, Lei Xing, Alan Yuille, and Yuyin Zhou. "CateNorm: Categorical Normalization for Robust Medical Image Segmentation". In: *MICCAI Workshop on Domain Adaptation and Representation Transfer*. Springer. 2022, **(Best Paper Honorable Mention)**.

[2] **Junfei Xiao**, Longlong Jing, Lin Zhang, Ju He, Qi She, Zongwei Zhou, Alan Yuille, and Yingwei Li. "Learning from Temporal Gradient for Semi-supervised Action Recognition". In: *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)* (2022).

[1] Siqi Wang, Lei Li, Yufeng Chen, Yueping Wang, Wenguang Sun, **Junfei Xiao**, Dylan Wainwright, Tianmiao Wang, Robert J Wood, and Li Wen. "A bio-robotic remora disc with attachment and detachment capabilities for reversible underwater hitchhiking". In: *2019 International Conference on Robotics and Automation (ICRA)*. 2019.

Honors and Awards

1st Place in Robust Vision Challenge - Semantic Segmentation Track (ECCV 2022)	2022
Best Paper Honorable Mention - DART (MICCAI Workshop)	2022
Academic Excellence Award	2016, 2017, 2018
JJWorld Scholarship	2017
National Scholarship (**Top 0.1%** national wide)	2016

Talks

Google Research Vision Reading Group (Topic: PaLM2-VAdapter)	April, 2024
Google Research (Topic: PaLM2-VAdapter)	Feb, 2024
MICCAI Workshop - DART (Topic: CateNorm)	Sept, 2022
JHU Computer Vision Seminar (Topic: Learning from Temporal Gradient)	Mar, 2022
JHU Computer Vision Seminar (Topic: CateNorm)	Mar, 2021

Service

Program Committee / Reviewer:

ICML 2021/2022 Workshop – Interpretable Machine Learning in Healthcare, **CVPR 2022 - 2024**, **ECCV 2022** , **ICCV 2023**, **NIPS 2023**, **ICLR 2024**

Technical Skills

Programming Languages: Python, Matlab, C/C++, SQL, Ocaml, Julia
Tools: LaTeX, Git, SolidWorks
Deep Learning Frameworks: Pytorch, Tensorflow
GRE: 162 (Verbal) + 170 (Math) + 3.5 (Writing)