

Tyler LaBonte

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Education

GEORGIA INSTITUTE OF TECHNOLOGY Ph.D., Machine Learning	2021–Present
UNIVERSITY OF SOUTHERN CALIFORNIA B.S., Applied and Computational Mathematics, <i>magna cum laude</i>	2017–2021
Skills: Python, TensorFlow, PyTorch, Numpy, Linux CLI, Docker, Git, Vim, \LaTeX	

Selected Publications

1. [Towards Last-layer Retraining for Group Robustness with Fewer Annotations](#)
Tyler LaBonte, Vidya Muthukumar, and Abhishek Kumar
NeurIPS 2023
2. [Scaling Novel Object Detection with Weakly Supervised Detection Transformers](#)
Tyler LaBonte, Yale Song, Xin Wang, Vibhav Vineet, and Neel Joshi
WACV 2023
3. [Quantifying the Unknown Impact of Segmentation Uncertainty on Image-Based Simulations](#)
Michael C. Krygier, Tyler LaBonte, Carianne Martinez, Chance Norris, Krish Sharma, *et al.*
Nature Communications, 12(1):5414, 2021

Industry Research Experience

GOOGLE <i>Machine Learning Research Intern</i>	Sunnyvale, CA 2023
– Developed techniques to leverage internal LLM to improve hardware-software code design (mostly confidential).	
MICROSOFT RESEARCH <i>Machine Learning Research Intern</i>	Redmond, WA 2021–2022
– Developed Transformer model for weakly supervised object detection with multiple instance learning.	
– Achieved object detection performance within 2% of fully-annotated benchmarks using only class labels.	
– Integrated pipeline into production system, enabling rapid delivery of new Windows Action Center capability.	
GOOGLE X <i>Machine Learning Research Intern</i>	Mountain View, CA 2020
– Invented CNN-LSTM for temporal identity preservation in multiple object tracking for computational agriculture.	
– Developed self-supervised method to extract novel time-series features from agricultural video imagery.	
– Presented results to Google executives, who approved an FTE hire to deploy my research to production systems.	

Selected Awards

DoD National Defense Science and Engineering Graduate Fellowship (\$170,000)	2021
NSF Graduate Research Fellowship (\$138,000—declined)	2021
USC Discovery Scholar (Research distinction for <100 USC graduates)	2021
USC Trustee Scholar (Full scholarship worth \$250,000)	2017