

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. Saving a Split for Last-layer Retraining can Improve Group Robustness without Group Annotations
Tyler LaBonte, Vidya Muthukumar, and Abhishek Kumar
ICML 2023 Workshop on Spurious Correlations, Invariance, and Stability
2. Scaling Novel Object Detection with Weakly Supervised Detection Transformers
Tyler LaBonte, Yale Song, Xin Wang, Vibhav Vineet, and Neel Joshi
WACV 2023
3. Dropout Disagreement: A Recipe for Group Robustness with Fewer Annotations
Tyler LaBonte, Vidya Muthukumar, and Abhishek Kumar
NeurIPS 2022 Workshop on Distribution Shifts

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