Tyler LaBonte

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Education

GEORGIA INSTITUTE OF TECHNOLOGY — 2021–Present
Ph.D., Machine Learning

UNIVERSITY OF SOUTHERN CALIFORNIA — 2017–2021
B.S., Applied and Computational Mathematics, *magna cum laude*

Skills: Python, TensorFlow, PyTorch, Numpy, Linux CLI, Docker, Git, Vim, LaTeX

Selected Publications

1. The Group Robustness is in the Details: Revisiting Finetuning under Spurious Correlations
   Tyler LaBonte, John C. Hill, Xinchen Zhang, Vidya Muthukumar, and Abhishek Kumar
   NeurIPS 2024
2. Towards Last-layer Retraining for Group Robustness with Fewer Annotations
   Tyler LaBonte, Vidya Muthukumar, and Abhishek Kumar
   NeurIPS 2023
3. Scaling Novel Object Detection with Weakly Supervised Detection Transformers
   Tyler LaBonte, Yale Song, Xin Wang, Vibhav Vineet, and Neel Joshi
   WACV 2023
4. 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 — Sunnyvale, CA
Machine Learning Research Intern — 2023

- Developed techniques to leverage Gemini LLM to improve architecture-agnostic hardware-software code design.
- Synthesized chain-of-thought and few-shot prompting strategies to generalize to data-scarce applications.

MICROSOFT RESEARCH — Redmond, WA
Machine Learning Research Intern — 2021–2022

- Developed Transformer model for weakly supervised object detection with multiple instance learning.
- Integrated pipeline into production system, enabling rapid delivery of new Windows Action Center capability.

GOOGLE X — Mountain View, CA
Machine Learning Research Intern — 2020

- Invented CNN-LSTM for temporal identity preservation in multiple object tracking for computational agriculture.
- 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