Tyler LaBonte

tlabonte@gatech.edu
https://tyler-labonte.com
https://github.com/tmlabonte
https://linkedin.com/in/tmlabonte
https://twitter.com/tmlabonte

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. Towards Last-layer Retraining for Group Robustness without Group 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   Sunnyvale, CA
Machine Learning Research Intern   2023

   – Developed techniques to leverage internal LLM to improve hardware-software code design (mostly confidential).

MICROSOFT RESEARCH   Redmond, WA
Machine Learning Research Intern   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   Mountain View, CA
Machine Learning Research Intern   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