

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 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 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.
- 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 Trustee Scholar (Full scholarship worth \$250,000) 2017