

WEIHAN LUO

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RESEARCH EXPERIENCE

DGP Lab, University of Toronto

Research Intern, Host: David Lindell, Andrea Tagliasacchi

July 2024 - November 2025

Project Link

- Developed novel 3D representation based on Neural ODEs to reconstruct plant growth from timelapse videos. Built custom imaging system to capture multi-view data of plant growth. Currently in submission.
Topics: 4D Gaussians, dynamic scene reconstruction, neural fields, HexPlane

DGP Lab, University of Toronto

Research Intern, Host: David Lindell

August 2023 - July 2024

Project Link

- Optimized lidar-based neural field for surface reconstruction, achieving high-fidelity surface reconstruction and robustness in low-light conditions
Topics: surface reconstruction, neural fields, Neuralangelo, InstantNGP

PUBLICATIONS

- [3] **Weihan Luo**, Lily Goli, Sherwin Bahmani, Felix Taubner, Andrea Tagliasacchi, David B.Lindell, "Grow with the Flow: 4D Reconstruction of Growing Plants with Gaussian Flow Fields", arXiv 2026.
- [2] **Weihan Luo**, Anagh Malik, David B. Lindell, "Transientangelo: Few-Viewpoint Surface Reconstruction Using Single-Photon Lidar", WACV 2025.
- [1] Samir Khaki and **Weihan Luo**, "CFDP: Common Frequency Domain Pruning", CVPR workshop 2023.

WORK EXPERIENCE

Royal Bank of Canada

Data analyst/scientist

May 2022 - September 2023

Technologies used: Python, LightGBM

- Developed a benchmark for future data analysis on a newly acquired Ontario housing valuation dataset.
- Conducted experiments on training on LightGBM with Optuna tuning to predict Canadian housing prices.
- Surpassed the baseline model by achieving a 2% increase in precision and 1% decrease in MAPE.

EDUCATION

University of Toronto

Honours Bachelor of Science in Mathematics, Statistics, and Computer Science

2019 - June 2024