

# WEIHAN LUO

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## RESEARCH EXPERIENCE

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### DGP Lab, University of Toronto

July 2024 - November 2025

*Research Intern, Host: David Lindell, Andrea Tagliasacchi*

*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

August 2023 - July 2024

*Research Intern, Host: David Lindell*

*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

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[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

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### Royal Bank of Canada

May 2022 - September 2023

*Data analyst/scientist*

*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

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### University of Toronto

2019 - June 2024

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