

ALLEN TU

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EDUCATION

University of Maryland, College Park

Ph.D. in Computer Science

College Park, MD

January 2025 – May 2027 (Expected)

- Advised by Professor Tom Goldstein

- Professional memberships: Computer Vision Foundation (CVF); IEEE Biometrics Council

M.S. in Computer Science

August 2023 – December 2024

B.S. in Computer Science, Minor in Statistics

August 2019 – December 2022

RESEARCH EXPERIENCE

University of Maryland Institute of Advanced Computer Studies

College Park, MD

Graduate Research Assistant

August 2023 – Present

IARPA Walk-through Rendering from Images of Varying Altitude (WRIVA): Unconstrained 3D reconstruction and novel view synthesis in challenging real-world environments.

- Efficient rendering, compression, and training methods for 3D and 4D Gaussian Splatting (3DGS/4DGS) [2, 3]
- Diffusion-based priors, multi-view super-resolution, and uncertainty quantification for sparse-view reconstruction
- PIs: Professor Tom Goldstein, Professor Matthias Zwicker, Professor Abhinav Shrivastava, Dr. Abhay Yadav, Dr. Cheng Peng, Professor Rama Chellappa

Systems & Technology Research

Arlington, VA

Computer Vision Research Intern / Co-op

June 2022 – January 2026

IARPA Biometric Recognition and Identification at Altitude and Range (BRIAR): Multimodal, opportunistic fusion of incomplete face, body, and gait information in severe operational conditions.

- Transfer Learning for Face Image Recognizability Assessment (2025) [1]
- Learned Frame Feature Aggregation for Face Recognition with Low-Quality Video (2024)
- Operating Condition-Invariant Barlow Twins and Multimodal Ensembling (2023)
- Style-Based Appearance Flow for Clothing-Robust Body Representation Learning (2022)
- PIs: Dr. Joshua Gleason, Dr. Jennifer Xu, Dr. Nathan Shnidman, Dr. Mark Keck, Professor Vishal Patel, Professor Rama Chellappa

Undergraduate Researcher

College Park, MD

University of Maryland Department of Computer Science

January 2021 – December 2022

SELECTED PUBLICATIONS

- Allen Tu, J. Gleason, K. Narayan, J. Xu, M. Meyn, and V. Patel, ‘TransFIRA: Transfer Learning for Face Image Recognizability Assessment’. Accepted to the *IEEE International Conference on Automatic Face and Gesture Recognition (FG)*, 2026.
- A. Hanson, Allen Tu, G. Lin, V. Singla, M. Zwicker, and T. Goldstein, ‘Speedy-Splat: Fast 3D Gaussian Splatting with Sparse Pixels and Sparse Primitives’, in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025, pp. 21537–21546.
- A. Hanson*, Allen Tu*, V. Singla, M. Jayawardhana, M. Zwicker, and T. Goldstein, ‘PUP 3D-GS: Principled Uncertainty Pruning for 3D Gaussian Splatting’, in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025, pp. 5949–5958.

* denotes equal contribution.