Brevin Tilmon

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SUMMARY

- Staff Software Engineer in computer vision, machine learning, and 3D/2D imaging systems.
- Experienced developing and deploying applied research to production.
- Published in CVPR, ICCV, 3DV, and TPAMI; several granted and pending patents in computer vision.

WORK EXPERIENCE

Quidient **Jul. 2023 – Present**
Staff Software Engineer
Senior Software Engineer

- Develop metrology-grade image-based 3D reconstruction software for damage estimation and inspection.
- Develop and deploy analytic and machine learning based damage detection models on 3D reconstructions.
- Lead technical blogs and papers, and SBIR/STTR proposals and projects.

University of Florida **May 2019 – Nov. 2023**
Graduate Research Assistant, Florida Optics and Computational Sensor Lab

- Developed adaptive structured-light, foveated imaging, super-resolution, and energy-efficient 3D sensing systems.
- Developed robust embedded software and custom hardware for imaging systems following RTOS principles.

Snapchat **May 2022 – Dec. 2022**
Research Scientist Intern, Computer Vision

- Developed a novel structured-light prototype for Specs AR glasses; work published at CVPR 2023 and patented.

Meta **Aug. 2021 – Dec. 2021**
Research Scientist Intern, Computer Vision

- Developed adaptive monocular depth model on large scale Meta datasets for AR/VR applications.

NASA **May 2021 – Aug. 2021**
Research Scientist Intern, Computer Vision

- Developed a relightable inverse rendering model for a photometric and multi view stereo imaging system.

SELECTED PUBLICATIONS AND PUBLIC WORK

- "Plenoptic Condensation: A Novel Approach to Generalized Scene Reconstruction." arXiv, 2026.
- "Automotive Hail Reconstruction with Quidient Reality." Quidient Technical Blog, 2025.
- "Apple-Log2Linear." Radiance Fields, 2024.
- "Energy-Efficient Adaptive 3D Sensing." CVPR, 2023.
- "SaccadeCam: Adaptive Visual Attention for Monocular Depth Sensing." ICCV, 2021.
- "FoveaCam: A MEMS Mirror-Enabled Foveating Camera." TPAMI, 2021; ICCP, 2020.
- "Towards a MEMS-based Adaptive LIDAR." 3DV, 2020.

PATENT

- "Energy-Efficient Adaptive 3D Sensing." Inventors: Jian Wang, Sizhuo Ma, Brevin Tilmon, Yicheng Wu, Gurunandan Krishnan Gorumkonda, Ramzi Zahreddine, Georgios Evangelidis. US Patent 19/396,149.
- "Fast Foveation Camera and Controlling Algorithms." Inventors: Sanjeev Jagannatha Koppal, Zaid Tasneem, Dingkang Wang, Huikai Xie, Brevin Tilmon. US Patent 16/844,597.

EDUCATION

University of Florida **May 2019 – Nov. 2023**
Ph.D. in Electrical and Computer Engineering

Murray State University **Aug. 2015 – May 2019**
B.S. in Electrical Engineering