MATIAS TURKULAINEN

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maturk.github.io

Profile

Ph.D. student at Aalto University focusing on 3D reconstruction in challenging, real-world environments.

Education

Aalto University
Espoo, Finland

Ph.D. Student, Department of Computer Science
2024-2028

Advisors: Prof. Juho Kannala and Prof. Arno Solin.

ETH Zurich
Zurich, Switzerland

M.Sc. Robotics, Systems and Control
2021 - Nov, 2024

Focus on computer vision and machine learning. Semester project @ ASL and MSc thesis @ CVG.

University of Glasgow
Glasgow, Scotland

BEng (Hons) in Mechanical Engineering with Aeronautics
2017-2021

Grade: 1st class honours. Cumulative GPA: 20.5/22.

Experience

Research Assistant
Aalto University
Dec 2023 - May 2024

Project related to 3D Gaussian splatting. Contributed to gsplat.

Research Intern
VTT, Technical Research Centre of Finland
April 2023 - Nov 2023

Hyperspectral radiance fields for material classification in 3D. Contributing to Nerfstudio and BARF-nerfstudio.

Research Assistant
Computer Vision and Learning Group (VLG), ETH Zurich
Feb 2022 - July 2022

Human pose estimation from images. Publication: EgoBody. Guided by Ph.D student Siwei Zhang (D-INFK, ETH Zurich).

Drone Systems Trainee
Nokia
Jun 2020 - Aug 2021

R&D intern at Nokia working with LTE connected drones at Nokia Drone Networks.

Publications

DN-Splatter: Depth and Normal Priors for Gaussian Splatting and Meshing,
M. Turkulainen, X. Ren, I. Melekhov, O. Seiskari, E. Rahtu, J. Kannala.
Winter Conference on Applications of Computer Vision (WACV), 2025.

Gaussian Splatting on the Move: Blur and Rolling Shutter Compensation for Natural Camera Motion,
O. Seiskari, J. Ylilammi, V. Kaatrasalo, P. Rantalankila, **M. Turkulainen**, J. Kannala, E. Rahtu, A. Solin.
European Conference on Computer Vision (ECCV), 2024.

gsplat: An Open-Source Library for Gaussian Splatting,
V. Ye, R. Li, J. Kerr, **M. Turkulainen**, B. Yi, Z. Pan, O. Seiskari, J. Ye, J. Hu, M. Tancik, A. Kanazawa.
Arxiv preprint (ArXiv:2409.06765), 2024.

Links

GitHub Scholar LinkedIn