## MATIAS TURKULAINEN

**Profile** 

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

Education

Aalto University

Espoo, Finland

PhD student, Department of Computer Science

2024-2028

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

ETH Zurich

**Zurich, Switzerland** 

MSc Robotics, Systems and Control

2021 - Nov, 2024

2017-2021

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

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

Experience

Research Assistant

Dec 2023 - May 2024

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

Research Intern

Aalto University

VTT Technical Research Centre of Finland

April 2023 - Nov 2023

Project related to hyperspectral radiance fields for material classification in 3D. Contributing to <a href="Merfstudio">Nerfstudio</a> and <a href="BARF-nerfstudio">BARF-nerfstudio</a>.

Research Assistant

Computer Vision and Learning Group (VLG), ETH Zurich

Feb 2022 - July 2022

Project related to human pose estimation from images. Publication: <u>EgoBody</u>. Guided by doctoral student Siwei Zhang (Doctorate at D-INFK, ETH Zurich).

**Drone Systems Trainee** 

Nokia Jun 2020 - Aug 2021

R&D intern at Nokia working with LTE connected drones. Worked on camera based precision landing with Jetson Nano and OpenCV.

**Publications** 

 $DN-Splatter:\ Depth\ and\ Normal\ Priors\ for\ Gaussian\ Splatting\ and\ Meshing,\ ArXiv\ preprint,\ 2024.$ 

Gaussian Splatting on the Move: Blur and Rolling Shutter Compensation for Natural Camera Motion, ECCV, 2024

gsplat: An Open-Source Library for Gaussian Splatting, Arxiv preprint, 2024.

Skills

Python C++ CUDA

Blender PyTorch OpenCV

Links GitHub Scholar LinkedIn

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