

Furkan Mert Algan

CONTACT INFORMATION	Address: Arcisstrasse 21 80333, Munich, Germany	Website: theycallmefm.github.io Phone: +49 152 371 709 65 E-mail: fmertalgan@gmail.com
RESEARCH INTERESTS	Machine Learning: Deep Learning, Convolutional Neural Networks, Transformers Computer Vision: 3D Vision, Scene Understanding, Motion Estimation, Diffusion Models Computer Graphics: 3D Reconstruction, Neural Rendering	
EDUCATION	Technical University of Munich , Munich, Germany Ph.D.in Chair of Media Technology Advisor: Prof. Steinbach Eckehard	2021–2026 (expected)
	Technical University of Munich , Munich, Germany M.Sc.in Informatics Thesis: <i>3D Motion Estimation on Point Clouds using Deep Learning</i>	2017–2021
	Sabanci University , Istanbul, Turkey. B.Sc.in Computer Science and Engineering Minor in Mathematics Graduation Project: <i>Sensitivity Time Control Function on Marine Radar Videos</i>	2013–2017
RESEARCH EXPERIENCE	Technical University of Munich , Munich, Germany <i>Research Associate</i> in the Chair of Media Technology <ul style="list-style-type: none">Currently in 6G Digital Twin project.Working for the realization of a continuously updated digital twin for objects, spatial geometry, surface properties, sensors, actuators and network.Research focusing on 3D model editing, generation and completionWorking closely with Chair of Communication Networks to create a real-time application. Supervisor: Eckehard Steinbach	Dec 2021 - Present
	Harvard University , Cambridge, MA, USA <i>Graduate Research Fellow</i> in the Visual Computing Group <ul style="list-style-type: none">Master's thesis about 3D motion estimation on point clouds using deep learning.Achieved state-of-the-art results using sparse convolutions and transformers.Paper submission is expected. Supervisors: Prof. Hanspeter Pfister, Prof. Donglai Wei, Prof. Matthias Niessner	Aug 2020 - June 2021
	Technical University of Munich , Munich, Germany <i>Graduate Research Intern</i> in the Visual Computing Lab <ul style="list-style-type: none">Combined Scan2CAD and VoxelHashing research projectsImplemented a real-time 3D reconstruction framework that replaces incomplete model by a CAD model in a 3D scene Supervisor: Prof. Matthias Niessner	Sept 2019 - June 2020
	<i>Research Intern</i> in the Chair of Robotics, AI and Real-time Systems <ul style="list-style-type: none">Contributed to a task-driven algorithm for configuration synthesis of the modular robot project.Gathered sample data in MATLAB and created data structures in C++ Supervisor: Prof. Matthias Althoff	Aug 2016 - Oct 2016
PROFESSIONAL EXPERIENCE	Roboy , Munich, Germany <i>Practical Project Student</i> <ul style="list-style-type: none">Worked in a multidisciplinary team to build ice cream selling RoboyContributed to Ravestate, a reactive library for real-time natural language dialog systems and created ice cream selling dialogue.Implemented a Telegrambot to call Roboy to a remote location. HAVELSAN , Istanbul, Turkey <i>Graduation Project Student</i>	May 2019 - Sept 2019 Nov 2016 - June 2017
	<ul style="list-style-type: none">Implemented the Sensitivity Time Control Function on Marine Radar Videos on FPGA.Gathered sea clutter data using K-distribution in MATLAB.	

TECHNICAL SKILLS	<p>Programming Languages: C++, Python</p> <p>Deep Learning: PyTorch, Scikit-learn</p> <p>Miscellaneous: Git, OpenGL, CUDA, ROS, Blender</p> <p>Editing Softwares: Adobe Premiere, Adobe Photoshop.</p>
NOTABLE PROJECTS	<p>Augmentation for Scene Flow Estimation This project aims to create a new augmentation technique for scene flow estimation using differentiable rendering.</p> <p>A KinectFusion Reimplementation on CUDA This project aims to implement a system for accurate real-time mapping of complex and arbitrary indoor scenes in variable lighting conditions, using only a low cost Kinect camera. A coarse-to-fine iterative closest point (ICP) algorithm has been implemented for point cloud registration using CUDA library in C++.</p> <p>Exploring the Relationship between Design Metrics and Software Diagnosability using Machine Learning The purpose of the project was to find best software metrics for fault localization using machine learning methods. A dataset has been created using Eclipse Plugin CodePro and it has been analyzed using Scikit-Learn library in Python.</p>
TEACHING EXPERIENCE	<p>Technical University of Munich <i>Teaching Assistant</i></p> <ul style="list-style-type: none"> Software Engineering Lab Winter 2023, Summer 2024, Winter 2024 Techniques in Artificial Intelligence Winter 2018 <p>Sabanci University <i>Undergraduate Teaching Assistant</i></p> <ul style="list-style-type: none"> Introduction to Programming Spring 2017 Calculus Spring 2015, Fall 2015, Fall 2016
HONORS AND AWARDS	<p>TEV-DAAD Master's Scholarship Awarded by Turkish Education Foundation and German Academic Exchange service due to success in undergraduate studies</p> <p>Sabanci University Merit Scholarship Awarded by Sabanci University due to success in national university entrance exam.</p>
LANGUAGES	Turkish (native), English (fluent), German (limited).
SELECTED PUBLICATIONS	<ol style="list-style-type: none"> F Mert Algan <i>et al.</i>, "LEMON: Localized Editing with Mesh Optimization and Neural Shaders" <i>arXiv preprint</i>, arXiv:2409.12024, 2024. [Online]. Available: https://arxiv.org/abs/2409.12024 Website
REFERENCES	Available upon request.