CURRICULUM VITAE

RESEARCH STATEMENT

I am deeply enthusiastic about the field of computer vision and 3D understanding both in the sense of necessary creativity in technical solutions and underlying industrial potentials in the very close future. I started to pursue my PhD at the TUM Visual Computing Group with Angela Dai as I am confident this the place to follow my passion at the highest levels.

In the next years I want to improve myself within academia, grow my network in the research community and would also like to test myself with industrial research internships too.

PERSONAL INFORMATION

Name	David Rozenberszki	**E-Mail**	davidrozenberszki@gmail.com
Date of Birth	1996.11.26	**Mobile**	+36 20 3482462
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STUDIES

2021-	PhD Candidate and Research Assistant at the Technical University of Munich, 3D AI Laboratory with Angela Dai.
2020-21	Eotvos Lorand University Computer Science for Autonomous Systems. GPA: 4.81 **MSc Thesis**: Building Semantic Maps of the real world (Topics: visual SLAM, 3D stereo matching, 3D reconstruction, 2D/3D semantic segmentation)
2020	KTH Royal Institute of Technology, Summer School on Big Data Analytics
2019-2020	Technische Universität Berlin, EIT Digital Master School program, Autonomous Systems major. GPA: 1.2 (equiv. 4.8 EU GPA)
2015-2019	Budapest University of Technology and Economics, Mechatronic Engineering BSc, Integrated Engineering specialization, excellent graded diploma. GPA: 4.71 **BSc Thesis**: Autonomous Flight of Miniature Air Vehicles in Intelligent Space (Topics: visual motion tracking, nonlinear control algorithms, real-time communication, and quadratic polynomial trajectory optimization)

PUBLICATIONS

2022	**"Language-Grounded Indoor 3D Semantic Segmentation in the Wild"** David Rozenberszki, Or Litany and Angela Dai, ECCV 2022 (Proceedings of the European Conference on Computer Vision). [page, GitHub], poster presentation
2021	**"Towards Universal User Interfaces for Mobile Robots"** David Rozenberszki and Gábor Sörös, a multi agent localization demonstration paper for the Augmented Humans Conference, 2021 February 22-24, demonstration presentation. [link]

2021	**"3D Semantic Label Transfer in Human-Robot Collaboration"** David Rozenberszki et al., ICCV 2021 (International Conference on Computer Vision) CVinHRC Workshop. [link, GitHub], oral presentation
2020	**"LOL: Lidar-only Odometry and Localization in 3D point-clouds"** David Rozenberszki and Andras Majdik, 2020 ICRA conference (International Conference on Robotics and Automation), oral presentation. [link, GitHub]
2018	**"The MTA SZTAKI micro aerial vehicle and motion capture arena"** David Rozenberszki and Andras Majdik, 12th Hungarian Conference of Image Processing and Pattern Recognition [link], oral presentation

PROGRAMMING SKILLS

- Python, C++, C#, Java
- CUDA, OpenCV, ROS
- SQL, NoSQL
- Linux, Unity, Docker
- Pytorch, Tensorflow, Keras
- Numpy, Scikit, Pandas, PySpark

LANGUAGE

English	C1 level proficiency (IELTS 7.5)
German	B2 level knowledge
Hungarian	Native proficiency

PAST EXPERIENCES

Nokia Bell Labs	**Working in a research team for Spatial AI topics** 3D instance segmentation and semantic geometry reconstruction from RGBD images. Simulating photorealistic environments in Unity for synthetic training data generation and domain adaption. Collaborative visual SLAM: Stereo, RGBD or mono SLAM, co-localization by spatial anchors, AR glasses for visualization of spatially aware robot user interfaces. Two first-author papers published. Technologies: Azure Spatial Anchors, HoloLens, Unity, ROS, ORBSLAM2, UcoSLAM, Kimera, Pytorch, TensorFlow
MTA SZTAKI **(Hungarian Academy of Sciences, Machine Perception Laboratory)**	**Lidar Odometry and Localization** Pure Lidar based localization in point cloud maps and real-time tracking. Technologies and algorithms: ROS, C++, Segmap, Loam **Tracking, Trajectory planning and Control** Indoor flight of MAVs in a motion-capture arena. **Image processing-based Brain and Liver segmentation** Medical 3D PET and CT image segmentation Technologies: MATLAB, U-Net CNN, Image Processing