

Dave Zhenyu Chen

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I'm a final-year PhD Researcher working on 3D Computer Vision at TU Munich. My research interests are text-driven 3D contents generation, and grounding natural language to 3D scenes. **citation: 405, h-index: 6**

RESEARCH EXPERIENCE

Snap Research

Research Collaboration, 3D Texture Synthesis from text inputs

Remote, Germany

Jan 2023 –

- Designed a new text-to-texture synthesis framework via depth-conditioned diffusion models.
- Published the work at ICCV 2023.

Meta AI

Research Collaboration, 3D vision-language foundation models

Remote, Germany

Jun 2022 – Nov 15

- Developed a novel foundation model for 3D vision-language tasks.
- Published the work at ICCV 2023.

Simon Fraser University

Visiting Researcher, Unified models for 3D vision-language tasks

Vancouver, Canada

Jan 2022 – May 2022

- Developed a novel unified model for 3D vision-language tasks.
- Published the work at ECCV 2022.

EDUCATION

TU Munich

PhD studies and research with Prof. Matthias Niessner

Munich, Germany

Feb 2019 – Jan 2024

- Conduct research projects on text-driven 3D generation, and grounding language to 3D scenes.

LMU Munich

Master studies in informatics, Avg. grade: 1.59/1.00 (Top 5%, low is good)

Munich, Germany

Oct 2016 – Nov 2018

University of Electronic Science and Technology of China

Bachelor studies in Computer Science, Avg. grade: 3.86/4.00 (Top 5%, high is good)

Chengdu, China

Sept 2012 – Jun 2016

SELECTED PUBLICATIONS

1. **SceneTex: High-Quality Texture Synthesis for Indoor Scenes via Diffusion Priors.** *Dave Zhenyu Chen, Haoxuan Li, Hsin-Ying Lee, Sergey Tulyakov, Matthias Nießner*, in CVPR 24'
2. **Text2Tex: Text-driven Texture Synthesis via Diffusion Models.** *Dave Zhenyu Chen, Yawar Siddiqui, Hsin-Ying Lee, Sergey Tulyakov, Matthias Nießner*, in ICCV 23'
3. **UniT3D: A Unified Transformer for 3D Dense Captioning and Visual Grounding.** *Dave Zhenyu Chen, Ronghang Hu, Xinlei Chen, Matthias Nießner, Angel X. Chang*, in ICCV 23'
4. **D3Net: A Unified Speaker-Listener Architecture for 3D Dense Captioning and Visual Grounding.** *Dave Zhenyu Chen, Qirui Wu, Matthias Nießner, Angel X. Chang*, in ECCV 22'
5. **Scan2Cap: Context-aware Dense Captioning in RGB-D Scans.** *Dave Zhenyu Chen, Ali Gholami, Matthias Nießner, Angel X. Chang*, in CVPR 21'
6. **ScanRefer: 3D Object Localization in RGB-D Scan using Natural Language.** *Dave Zhenyu Chen, Angel X. Chang, Matthias Nießner*, in ECCV 20'

SERVICES

Organizer: Workshop on Language for 3D scenes (CVPR 21', ECCV 22, ICCV 23')

Reviewer: CVPR, ECCV, ICCV, NeurIPS, SIGGRAPH, ICRA, IJCV, WACV, 3DV, TVCG.

SKILLS

Tools: PyTorch, Keras, TensorFlow, OpenCV, Scikit-Learn, NumPy, Blender

Languages: Chinese (Native), English (Professional), German (Intermediate)