Chandan Yeshwanth

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PhD candidate at the 3D Understanding Lab, TU Munich (Prof. Angela Dai), working on 3D indoor scene understanding.

Experience working with multimodal 3D/2D data and indoor scans, publication record in top CV/ML conferences (ICCV, NeurIPS, 3DV, 1500+ citations). Proficient in the full lifecycle of research, from data collection to model development.

Publications

Joint 3D reconstruction of identical objects	Lookalike3D: Seeing Double in 3D **Chandan Yeshwanth** and Angela Dai.	NeurIPS 2026
Fine-grained captioning of 3D objects	ExCap3D: Expressive 3D Scene Understanding via Object Captioning with Varying Detail **Chandan Yeshwanth**, David Rozenberszki, and Angela Dai.	ICCV 2025
Large-scale NVS and 3D semantics benchmark	ScanNet++: A High-Fidelity Dataset of 3D Indoor Scenes **Chandan Yeshwanth***, Yueh-Cheng Liu*, Matthias Nießner, and Angela Dai.	ICCV 2023 **Oral (1.68%)**
First transformer for indoor scene generation	SceneFormer: Indoor Scene Generation with Transformers Xinpeng Wang*, **Chandan Yeshwanth***, and Matthias Nießner.	3DV 2021
Synthetic coordinates for molecular graphs	Directional Message Passing on Molecular Graphs via Synthetic Coordinates Johannes Klicpera, **Chandan Yeshwanth**, and Stephan Günnemann.	NeurIPS 2021
Vehicle re-identification	Comparative Study on Various Losses for Vehicle Re-Identification Adithya Shankar, Akhil Poojary, Varghese Kollerathu, **Chandan Yeshwanth**, et al.	CVPRW 2019

Research Interests

Scene understanding with 3D/2D data, semantics, functionality and physics for robot and human interaction. Understanding scenes through natural language. 3D reconstruction. Scene generation. World models for AR/VR and robotics.

Experience

May 2022 – Ongoing
Expected completion: Late 2027

Research Assistant at TUM, 3D Understanding Lab

- Ongoing project: agentic generation of realistic, functional and aesthetic indoor scenes.
- Led the ScanNet++ project (**1000+ citations, 400+ Github stars**, ICCV 23): 1000+ indoor laser scans, panoramas, DSLR images and iPhone RGBD streams. Widely adopted for 3D reconstruction, semantics and NVS.
- Developed pipelines for high-resolution point cloud and mesh processing, semantic annotations. Led data collection and processing with team of 20+. Developed long-tail 100-class semantic and instance segmentation baselines.
- Organized the ScanNet++ workshop at CVPR 2024, 2025 and 2026, managing the public benchmark with 3000+ users, 40+ submissions across 4 tasks.
- Developed the Lookalike3D model (NeurIPS 26) and annotated a dataset to detect identical and similar objects in 3D scenes for joint 3D reconstruction.
- Developed the ExCap3D model (ICCV 25) for fine-grained object/part-level captioning with 17/124% CIDEr improvement over baselines. Created a large-scale captioning dataset using VLMs.

May 2020 – Nov 2020

Advanced Deep Learning Project at TUM, advised by Prof. Matthias Nießner

- Developed SceneFormer, the first transformer-based model for indoor scene generation (**200+ citations**, 3DV 21)

Jan 2020 – Mar 2021

Student Research Assistant at TUM, Data Analysis and Machine Learning Group

- Efficient node and edge embeddings for graphs based on synthetic coordinates for molecular property prediction (NeurIPS 21)

Feb 2020 – Mar 2021

Student Research Assistant at TUM, Computer-aided Medical Procedures Group

- Developed a VoteNet-based architecture for pedestrian detection in point clouds to ensure safety of ADAS

Jun 2017 – Aug 2019

Research Engineer at Siemens Corporate Technology, Bangalore

- Productionized a fault-tolerant, Docker-based vision system (Faster R-CNN, YOLO, Deep SORT) for vehicle detection, tracking and counting. Developed vehicle re-ID models (CVPRW 19)
- Built OpenGL rendering for CAD parts and DELF part retrieval (90% mAP); set up CI and code standards

Education

Oct 2019 – Feb 2022 — Master's in Robotics, Cognition and Intelligence
Technical University of Munich, Germany. GPA: 1.8 (1.0 highest)
Thesis: Contrastive Learning on 3D Scenes Using 3D and RGB Information

Aug 2012 – Jun 2017 — BTech & MTech in Information Technology, IIIT, Bangalore. GPA: 3.8/4.0
Thesis: Estimating Traffic Density at Intersections using Deep Learning

Other Information

Reviewing: ICCV 2023, ECCV 2024, CVPR 2025, ICCV 2025, BMVC 2026, ECCV 2026, NeurIPS 2026
Skills: Python, Pytorch, Git, Docker, Wandb, Pytorch-Lightning, Blender, C++, Flask/Django, Linux, Claude Code
Languages: English (Fluent), German (Fluent), Kannada (Native), Hindi