Yuanbo Li

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Github: https://github.com/Liyb2002 Website: https://liyb2002.github.io/

Education

Brown University (Sep 2024 -) Ph.D in Computer Science

Brown University (Sep 2022 - May 2024) M.S in Computer Science

Columbia University, Columbia College (Sep 2018 - May 2022) B.A in Mathematics

Research Interests

Computer Graphics, 3D Modeling, CAD, Neural-Symbolic reasoning

Publications

PLLM : Pseudo Label Methods for LLM CAD Generation, (in submission), **Yuanbo Li**, Dule Shu, Yanying Chen, Matt Klenk, Daniel Ritchie

CADrawer : Autoregressive CAD Generation from 3D Sketches, Eurographics 2026, **Yuanbo Li**, Gilda Manfredi, Henro Kriel, Chengye Hao, Xianghao Xu, Adrien Bousseau, Daniel Ritchie

Learning object placement programs for indoor scene synthesis with iterative self training, (in submission), Adrian Chang, Kai Wang, **Yuanbo Li**, Manolis Savva, Angel X Chang, Daniel Ritchie

Active Appearance and Spatial Variation Can Improve Visibility in Area Labels for Augmented Reality, 2024 IEEE Visualization and Visual Analytics, Hojung Kwon, **Yuanbo Li**, Xiaohan Ye, Praccho Muna-McQuay, Liuren Yin, James Tompkin

PossibleImpossibles: Exploratory Procedural Design of Impossible Structures, Eurographics 2024, **Yuanbo Li**, Tianyi Ma, Zaineb Aljumayaat, Daniel Ritchie

Ongoing Projects

Sketch Lib : Building CAD Programs from Sketch Segments
Tldr : we propose a method to allow users edit from multi-view given a single sketch. The challenge of this project mostly lies in a cross-optimization between LLM generated shape structure and image segmentation / 3D reconstruction.

Work Experience

Toyota Research Institute (May 2025 - Aug 2025) *Research Intern*
- Worked on research project : *PLLM : Pseudo Label Methods for LLM CAD Generation*
- In charge of reporting/sharing LLM for CAD related projects

ARPA Technology (May 2022 - Aug 2022) / (June 2020 - Aug 2020) *Software Engineer Intern*
- Designed and implemented Behavior Driven Tests for Randcast, a distributed random number generating system for Blockchain Networks, and wrote documentations

• Designed Wrote smart contract for Bella.fi, a DeFi protocol, based on Open Zeppelin contract libraries

Tencent Cloud (May 2021 - Aug 2021) *Technical Product Manager Intern*

• Participated in architecture design for blockchain-based IPFS (InterPlanetary File System). • Wrote 10+ pages documentation and 30+ page whitepaper to help build on the IPFS system.

Talks

CAD Generations using LLMs, Brown Visual Computing Group, Oct 2025
Sketch to CAD, Brown Visual Computing Group, Nov 2024
Inverse Procedural Modeling, Brown Visual Computing Group, Nov 2023
Generating 3D Impossible Structures, Brown Visual Computing Group, Nov 2023 / Feb 2023

Services

TVCG Reviewer, 2024

Teaching Positions

Advanced Graphics TA, (prof. Daniel Ritchie) , Brown Computer Science Department, Feb 2024 - May 2024
Calculus III TA, (prof. Daniele Alessandrini) , Columbia Mathematics Department, Sep 2021 - Dec 2021