

YIZHI WANG

San Jose, California, USA

Homepage: <https://yizhiwang96.github.io/>

Email: yizhiwang.cg@gmail.com

EDUCATION

Peking University, China

Ph.D. in Computer Graphics, Supervisors: Prof. Zhouhui Lian and Jianguo Xiao

Sep. 2017 - June 2022

Peking University, China

Bachelor in Computer Science

Sep. 2013 - Jul. 2017

WORKING EXPERIENCE

ByteDance/Tiktok, USA

Research Scientist

Nov. 2024 - Now

Simon Fraser University, Canada

Postdoctoral Fellow, Supervisor: Prof. Richard (Hao) Zhang

Jan. 2023 - Nov 2024

Shenzhen University, China

Visiting Scholar, Advisor: Prof. Ruizhen Hu

Sep. 2022 - Nov. 2022

Tencent

Research Intern, Advisor: Dr. Wenhan Luo

June. 2021 - Nov. 2021

RESEARCH INTERESTS

Computer Graphics, Computer Vision, Geometric Modeling, Image/Shape Synthesis

PUBLICATIONS

Yizhi Wang, Wallace Lira, Wenqi Wang, Arash (Ali) Mahdavi-Amiri, Hao (Richard) Zhang. Slice3D: Multi-Slice, Occlusion-Revealing, Single View 3D Reconstruction. CVPR. 2024.

Mingrui Zhao, **Yizhi Wang**, Fenggen Yu, Changqing Zou, Ali Mahdavi-Amiri. SweepNet: Unsupervised Learning Shape Abstraction via Neural Sweepers. ECCV. 2024.

Sai Raj Kishore Perla, **Yizhi Wang**, Arash (Ali) Mahdavi-Amiri, Hao (Richard) Zhang. EASI-Texturing: Edge-Aware Mesh Texturing from Single Image. SIGGRAPH 2024 Journal-Track Paper. 2024.

Yizhi Wang*, Zeyu Huang*, Ariel Shamir, Hui Huang, Hao (Richard) Zhang, Ruizhen Hu. ARO-Net: Learning Implicit Fields from Anchored Radial Observations. CVPR. 2023. (* denotes equal contribution)

Maham Tanveer, **Yizhi Wang**, Arash (Ali) Mahdavi-Amiri, Hao (Richard) Zhang. DS-Fusion: Artistic Typography via Discriminated and Stylized Diffusion. ICCV. 2023.

Yuqing Wang, **Yizhi Wang**, Longhui Yu, Yuesheng Zhu, Zhouhui Lian. DeepVecFont-v2: Exploiting Transformers to Synthesize Vector Fonts with Higher Quality. CVPR. 2023.

Yizhi Wang, Guo Pu, Wenhan Luo, Yexin Wang, Pengfei Xiong, Hongwen Kang, Zhouhui Lian. Aesthetic Text Logo Synthesis via Content-aware Layout Inferring. CVPR. 2022.

Yizhi Wang, Zhouhui Lian. DeepVecFont: Synthesizing High-quality Vector Fonts via Dual-modality Learning. ACM Transactions on Graphics (SIGGRAPH Asia 2021 Technical Paper). 2021.

Yizhi Wang*, Yue Gao*, Zhouhui Lian. Attribute2Font: Creating Fonts You Want From Attributes. ACM Transactions on Graphics (SIGGRAPH 2020 Technical Paper, * denotes equal contribution). 2020.

Yizhi Wang, Zhouhui Lian. Exploring Font-independent Features for Scene Text Recognition. ACM Multimedia. 2020.

Yizhi Wang, Zhouhui Lian, Yingmin Tang, Jianguo Xiao. Boosting Scene Character Recognition by Learning Canonical Forms of Glyphs. International Journal on Document Analysis and Recognition. 2019.

Yizhi Wang, Zhouhui Lian, Yingmin Tang, Jianguo Xiao. Font Recognition in Natural Images via Transfer Learning. International Conference on Multimedia Modeling. 2018.

Jie Chen, Zhouhui Lian, **Yizhi Wang**, Yingmin Tang, Jianguo Xiao. Irregular Scene Text Detection via Attention Guided Border Labeling. Science China Information Sciences. 2019.

RESEARCH PROJECTS

3D Shape Reconstruction and Generation

Sep. 2022 - Present

GrUVi, Simon Fraser University

Advisor: Prof. Richard (Hao) Zhang

- Introducing Slice3D, a completely new way of solving single-view 3D reconstruction. Instead of going from single- to multi-view, we advocate going from single-view to multi-slice images and then lift them to 3D.
- Proposing a novel shape encoding (Anchored Radial Observation) for learning implicit field of shapes, with an application of surface reconstruction from point clouds.

Font Synthesis

Sep. 2019 - June. 2022

WICT, Peking University

Advisor: Prof. Zhouhui Lian

- Proposing a novel generative model which takes the font attributes as input and synthesizes the corresponding glyph images.
- Proposing a novel method, DeepVecFont, to directly generate vector fonts by exhaustively exploiting the dual-modality information (i.e., raster images and vector outlines).

Layout Synthesis for 2D Graphic Design

Jun. 2021 - March. 2022

Tencent (as an intern)

Advisor: Dr. Wenhan Luo

- Proposing a GAN-based method which learns from the human-designed posters and generates layouts for new content automatically. It has been applied into the automatic poster/cover production for Tencent Video.

Scene Text (Character) Recognition

Jul. 2019 - Jul. 2020

WICT, Peking University

Advisor: Prof. Zhouhui Lian

- Addressing the challenge of font variance in scene text recognition (STR) and proposing a font-independent feature representation method to increase the robustness of STR models.

Font Recognition

Jul. 2017 - Jan. 2018

WICT, Peking University

Advisor: Prof. Zhouhui Lian

- Proposing an image composition method and a transfer learning scheme for font recognition in the wild.

Scene Text Detection

Oct. 2017 - Jan. 2018

WICT, Peking University

Advisor: Prof. Zhouhui Lian

- Proposing a novel border-labeling method to segment closely located text instances more precisely.

HONORS AND AWARDS

Ranked 4/100+ in the Competition of Outstanding PhD Dissertation, Peking University	2022
Merit Student (top 10%), Peking University	2018, 2021
Excellent Student (top 5%), Wangxuan Institute of Peking University	2020, 2021
CETC The 14TH Research Institute Glarun Scholarship (top 10%), Peking University	2018
Excellent Award (top 5%), The 17th Programming Contest of Peking University	2018
Outstanding Undergraduate Dissertation of Peking Univerisity	2017

PATENTS

Chinese font recognition in the wild using a deep neural network
CN Patent App 201810104830.7 (granted)

Text recognition by learning canonical forms of glyphs
CN Patent App 201910716704.1 (granted)

Vector font synthesis via dual-modality learning
CN Patent App 202111555201.4 (granted)

PEER-REVIEWS

Conferences: SIGGRAH Asia (2024), CVPR (2022, 2023, 2024), ICCV (2021, 2023), ECCV (2022 2024), AAAI (2022, 2023, 2024)

Journal: IEEE PAMI, IEEE TVCG, Expert Systems With Applications

TECHNICAL SKILLS

Programming: C/C++, Python, Matlab
Deep Learning Framework: PyTorch, Tensorflow
Tools: Adobe Photoshop/Premiere/Illustrator

TEACHING EXPERIENCE

Elementary Number Theory	Spring, 2018
Teaching Assistant	EECS, Peking University

Intelligent Optimization Methods	Fall, 2019
Teaching Assistant	EECS, Peking University