

# YIZHI WANG

San Jose, California, USA

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## EDUCATION

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**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

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**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

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

## PUBLICATIONS

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**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

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### **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

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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

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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

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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

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

## TEACHING EXPERIENCE

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

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