# ZEYU HUANG

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## EDUCATION

**Shenzhen University** Sep. 2019 - Jun. 2024 (Expected)
*Ph.D. in Computer Science* *Supervisor: Prof. Ruizhen Hu*

**Shenzhen University** Sep. 2015 - Jun. 2019
*B.Eng. in Software Engineering*

## RESEARCH INTERESTS

Computer Graphics, Computer Vision and Robotics, especially on graphics content synthesis.

## PUBLICATIONS

1. Yizhi Wang*, **Zeyu Huang***, Ariel Shamir, Hui Huang, Hao Zhang, and Ruizhen Hu, "ARO-Net: Learning Neural Fields from Anchored Radial Observations", **CVPR**, 2023. (*equal contribution)
2. **Zeyu Huang**, Juzhan Xu, Sisi Dai, Kai Xu, Hao Zhang, Hui Huang, and Ruizhen Hu, "NIFT: Neural Interaction Field and Template for Object Manipulation", International Conference on Robotics and Automation (**ICRA**), 2023.
3. Ruizhen Hu, **Zeyu Huang**, Yuhan Tang, Oliver van Kaick, Hao Zhang, and Hui Huang, "Graph2Plan: Learning Floorplan Generation from Layout Graphs", ACM Transactions on Graphics (Special Issue of **SIGGRAPH**), Vol. 39, No. 4, 2020.

## PROJECT EXPERIENCE

**Object Reconstruction** Sep. 2022 - Nov. 2022
*https://aro-net.github.io/*

Proposed a novel shape encoding for learning neural field representation of shapes that is category-agnostic and generalizable for significant shape variations.

**Object Manipulation** Jan. 2022 - Sep. 2022
*https://vcc.tech/research/2023/NIFT*

Proposed a descriptive and robust interaction representation of object manipulations to facilitate imitation learning. Validated in a real world environment.

**Motion Capture** Mar. 2021 - Sep. 2021
*https://github.com/zzilch/VRMocap*

Built a system to capture the human-scene interaction in virtual reality and an annotation tool to label the captured motion sequence.

**Floorplan Generation** Sep. 2019 - Jun. 2020
*https://vcc.tech/research/2020/Graph2Plan*

Proposed a learning framework for automated floorplan generation which combines generative modeling using deep neural networks and user-in-the-loop designs to enable human users to provide sparse design constraints.

**Functionality Learning** Sep. 2018 - Jun. 2019

*https://github.com/zzilch/Functionality-Learning*

Proposed a deep learning approach to acquire and substantiate functional understanding of 3D indoor scenes via human activity prediction and hallucination.

## HONORS AND AWARDS

National Scholarship, Shenzhen University 2020
Honours Bachelor's Degree, Shenzhen University 2019
Excellent Student, Shenzhen University 2016, 2021

## PATENTS

Floor plan image generating method and device, computer device and storage medium
CN Patent App 202010257143.6 (granted)

## TECHNICAL SKILLS

**Computer Languages** Python, LaTeX, C, C++, C#, Java, JavaScript
**Framework & APIs** Pytorch, OpenCV, OpenGL, Unity
**Tools** CMake, Blender, Phototshop, Premiere, Illustrator

## TEACHING EXPERIENCE

**Computer Graphics** Fall 2019
*Teaching Assistant* *Shenzhen University*