

# YUHE NIE

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Southern University of Science and Technology, Nanshan District, Shenzhen, GuangDong province, China

## EDUCATION

### Southern University of Science and Technology

- Bachelor of Computer Science and Engineering
- GPA: **3.80** / 4.00

ShenZhen, China

Sep 2019 - Jun 2023

### Nanyang Technological University

- School of Computer Science and Engineering (GEM-Trailblazer Exchange Program)
- GPA: **4.83** / 5.00

Singapore

Aug 2022 - Dec 2022

### Duke Kunshan University

- HCIX Summer Research

JiangSu, China (Remote)

May 2022 - Dec 2022

### National University of Singapore

- NUS SOC Summer Workshop AI & Media Cluster
- Performance: A+

Singapore (Remote)

May 2021 - Jul 2021

## PORTFOLIO

For more projects and relative experiences, please refer to [onyh-dolphin.itch.io](https://onyh-dolphin.itch.io)

### Digital Dunhuang - Mount. Wutai

May 2022 - Oct 2022

- VR cultural heritage reconstruction

### Dancing Line - Bard's Adventure

Aug 2022 - Sep 2022

- Dancing-line-liked one-button rhythm game

### AR Museum Guide

Sep 2021 - Jun 2022

- AR application based on Hololens2

### Jungle Shooter

Mar 2022 - Jul 2022

- MR bow game based on Rhino-X

### Global Covid19 Statistic Platform

Nov 2021 - Dec 2022

- A software platform which can display covid19 data

### SUSTech Pokémon

Oct 2021 - Nov 2021

- Pokémon cultivation game

### Floating Down the Life

May 2021 - July 2021

- Interactive fiction game

## HONOR & AWARD

Completion & Recommendation at the GWB Game Jam 2022

Jan 2022

Rank 40 (top 5%) at the 4th Tencent Geek Competition - Artificial Intelligence on Tetris

Aug 2021

Honorable mention (top 30%) at the Interdisciplinary Contest In Modeling

Feb 2021

Fifth place (group work 5 / 50) at the 3rd NVIDIA Sky Hackathon

Dec 2020

First Prize (top 5%) at the MathorCup University Mathematical Modeling Challenge

Apr 2020

Second Place (top 15%) at Annual Outstanding Student Scholarship, SUSTech

Sep 2021

Second Place (top 15%) at Annual Outstanding Student Scholarship, SUSTech

Sep 2020

Third Place (top 30%) at Scholarships for Incoming Freshmen, SUSTech

Sep 2019

## RESEARCH & PUBLICATION

### Extend Wave Function Collapse to Large-Scale Content Generation

Feb 2023

Procedural Content Generation, Algorithm Optimization, Game Intelligence

- This paper is accepted by **IEEE CoG 2023**

- Role: Researcher

- Tag: Unity, PCG, Game Intelligence

### Pilgrimage to Pureland: Art, Perception and the Wutai Mural VR Reconstruction

Feb 2023

A Virtual Reality culture heritage digitization and narrative exploration based on Oculus which transfers the mural of

Mount Wutai in Dun Huang No. 61 Cave into VR.

- Our paper is temporarily accepted by **IJHCI 2023**

- arXiv:**2304.07511**

- Role: Main Developer, Experimenter, Thesis Writer

- Tag: Unity, VR, HCI, Cultural Heritage, Narration, Immersion

### **Remote Research Assistant in Duke Kunshan**

*Aug 2022*

- Offer assistance to Unity development, network problems, and distribution of neural network model

### **Methods, devices, servers and storage for obtaining the close contact's information**

*May 2021*

- Application Number: 202110077477.X (Substantial Review)

- Public number: CN112866991A

## **INTERNSHIP**

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### **NetEase Information Technology Co., LTD**

Guangzhou, China

#### Game Application Developer

*Feb 2022 - May 2022*

- Maintained and deployed two MR FPS games and deployed them into offline physical stores

- Solved bugs and network performance in MR FPS games, such as UI display and port configuration problems

- Reconstructed and developed the demo and gameplay of one of the new MR Archer Game

- Participated in interns recruitment as resume process and interviewer, recommended 10 candidates, interviewed six people and successfully recommended one candidate to our group

### **Tencent IEG - Marketing & User Research with 99 CONSULTING**

Shenzhen, China

#### I-MUR Future Signal Station User Study Researcher

*Apr 2020 - Nov 2020*

- Did research on cutting-edge games and entertainment trends and reporting, wrote more than 100,000 word reports

- Analyzed competitive games, played internal beta games and gave feedback, participated in an internal test of the game and disassembled competing games on multiple occasions

- Provided feedback to the production team, did research for data analysis of game and entertainment trends

### **Binglun Overseas Business Division**

Shenzhen, China

#### Android Program Developer

*Jun 2020 - Nov 2020*

- Developed an application that staff can identify the information of the material box by scanning the code, and quickly complete the assembly process

## **LEADERSHIP & VOLUNTEER EXPERIENCE**

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### **Department of Computer Science, Shude College, Grade 2019**

2021-2023

#### Monitor

- Coordinated class meetings, arranged fun sports and collected class materials

### **Publicity Centre of Shude College**

2020-2021

#### Director of Design Department

- Designed the poster, logo, mascot of Shude college and offered design training for department members

### **Class 1918, Shude College**

2019-2023

#### Commissary in Charge of Publicity

- Responsible for publicity, including taking photo, writing articles and design poster for each class meeting

## **ADDITIONAL INFORMATION**

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**Languages:** Mandarin (Native), English(Advanced), Japanese (Intermediate)

**Programming:** Java, C#, C++, Python, Markdown, SQL, Html, CSS

**Dev-ops:** Spring Boot, Django, Pytorch, Linux, Git, L<sup>A</sup>T<sub>E</sub>X, Zotero, Jetbrain Tools, Anaconda, Visual Studio

**Interests:** Game Development (Unity3D), VR, AR, MR, HCI, Computer Graphic

**Hobbies:** Painting, Animation, Game