

# KAIYUAN(GENTEKI) ZHANG

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## EDUCATION

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**Columbia University**, *New York, NY*

Sep 2022 - Dec 2023(exp.)

MS in Mechanical Eng, curr GPA 3.8

- *Relevant Coursework:* Machine learning, Reinforced learning, 3D pipeline rendering, Genetic algorithm, Robot control & simulation

**Shanghai Jiao Tong University**, *Shanghai, China*

Sep 2017 - Jun 2021

BEng in Computer Sci, Mechanical Eng., GPA 3.7

- *Relevant Coursework:* Computer Vision, FPGA Design by Vivado, GUI

## SKILL

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**Programming**

Comfortable with C++, Python, Matlab

**Development Tools**

CMake/Makefile, Git/Github, shell, Linux

**Frameworks**

CUDA C++, Pytorch, OpenCV, Qt/PyQt, OpenGL

**Designing Skill**

Comfortable with Fusion 360, Solidworks

## PROJECTS

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**CUDA Neural Network**

Jul 2023 - Jul 2023

Columbia University

*New York, NY*

- Implement a neural network using CUDA C++ to identify digits from CIFAR dataset, [Github](#)

**pyvts**

Jan 2023 - Now

Columbia University

*New York, NY*

- Developed an open-source python library interacting with VTube Studio API, [Github](#).
- Published on [PyPI](#) with [documentation](#)
- Used by at least four open-source AI-Vtuber projects

**Evolving Robot**

Sep 2022 - Dec 2022

Columbia University

*New York, NY*

- Developed a 3D physics simulator with OpenGL
- Used genetic algorithm to evolving the shape and behaviors of robot, and achieved a robot with a speed of 1.7 m/s.

**Improvement of An Electric Intelligent Working Robot**

Feb 2021 - Sep 2021

Shanghai Jiao Tong University, China Southern Power Grid

*Shanghai, China*

- Detect the position of power cable using binocular system and LiDar, with error under 5mm.
- Enhanced robot manipulating system.

## INTERNSHIP

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**Machine Learning Engineer**

Feb. 2022

Binjiang Institute of Zhejiang University

*Hangzhou, China*

- Developed Voice robot navigation via NLP with colleagues.
- Designed robot simulation based on open source project habitat

## EXTRA-CURRICULAR ACTIVITIES

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Head of Publicity Department, *SJTU Cube Association*

Oct 2017 - Dec 2019

- Organized 2018 SJTU WCA Winter and 2018 SJTU WCA Summer.