Longwen Zhang

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EDUCATION

ShanghaiTech University, Shanghai *September 2018 - Present*
Bachelor, Computer Science and Technology GPA 3.89/4, major GPA 4/4
School of Information Science and Technology

MAJOR COURSES

Bachelor, ShanghaiTech University

Introduction to Programming (CS100)	A+
Electric Circuits (EE111)	A+
Discrete Mathematics (SI120)	A+
Algorithms and Data Structures (CS101)	A+
Compilers (CS131)	A+
Cryptography (CS252)	A+
Computer Architecture (CS110)	A+
Signals and Systems (EE150)	A+
Algorithm Design and Analysis (CS240)	A+
Reinforcement Learning (SI252)	A+
Computer Vision (CS172)	A+
Artificial Intelligence (CS181)	A+
Matrix Computation (SI231B)	A+
Machine Learning (CS282)	A+
Computer Vision II (CS272)	A+

WORKING EXPERIENCE

Deemos Technology *2020 - Present*
Co-founder

· Algorithm and engineering development

Multi-disciplinary Artificial Reality Studio (MARS), ShanghaiTech *2020 - Present*
Partner

· Developer of *Light Down* and *Domilo Lecture*

GeekPie, ShanghaiTech *2019 - Present*
Vice president

· Developer of open source OJ, PIEGON
· Participated in Operation & Maintenance Department

ACM Club, ShanghaiTech *2019 - Present*
President

· Organize training and contests

PROJECTS

Neural Video Portrait Relighting *April 2021*
Video portraits relighting is critical in user-facing human photography, especially for immersive VR/AR experience. Recent advances still fail to recover consistent relit result under dynamic illuminations from monocular RGB stream, suffering from the lack of video consistency supervision. In this project, we propose a neural approach for real-time, high-quality and coherent video portrait relighting, which jointly models the semantic, temporal and lighting consistency using a new dynamic OLAT dataset.
Project link: `https://zhanglongwen.com/projects/nvpr`

Light Field Stage *April 2021*
The new Light Field Stage is used to project arbitrary environment light on stuff to reconstruct 3D models or relight them in virtual environments. Typically, a Light Field Stage projects different gradient patterns on stuff to get the high-resolution specular surface normal.
Website: `https://www.deemos.com/`

Light Down *June 2020*
An efficient algorithm with GUI using *One Light At a Time* (OLAT) data to render realistic-looking human faces under any environment maps. The OLAT data is captured to record the reflection field of a human face, which makes it huge. This algorithm do interpolation, warp and weighted superposition on OLAT data efficiently.
Demo link: `https://youtu.be/2lZv9uCkZEc`

Domilo Lecture *March 2020*
A multi-view live system using high-frequency audio signals to ensure the synchronization between streams. The streams could be pushed by smartphones and the server will manipulate and merge these streams.

GeekPie Online Judge *September 2019*
An online judge for courses, using *gitlab* for program submission. It has advantages on handling project-like Homeworks which contain more than one file comparing to the traditional online judges. It will be open-source soon.
Website: `https://oj.geekpie.club`

PUBLICATIONS

Neural Video Portrait Relighting in Real-time via Consistency Modeling - ICCV 2021 *April 2021*
Longwen Zhang, Qixuan Zhang, Minye Wu, Jingyi Yu, Lan Xu
Website: `https://zhanglongwen.com/projects/nvpr`
Arxiv: `https://arxiv.org/abs/2104.00484`

TEACHING EXPERIENCE

Introduction to Programming (CS100), ShanghaiTech *Fall 2020*
Teaching assistant

- Operation and maintenance of online judge
- Assign homework and conduct discussions
- 2021 outstanding teaching assistant

Algorithms and Data Structures (CS101), ShanghaiTech *Fall 2020*
Teaching assistant

- Operation and maintenance of online judge
- Assign homework and conduct discussions
- Design algorithm programming homework
- 2020 outstanding teaching assistant

Introduction to Information Science and Technology (SI100), ShanghaiTech *Spring 2020*
Teaching assistant

- Assign homework and conduct discussions

ACHIEVEMENTS

2021 ShanghaiTech SIST outstanding teaching assistant *December 2020*

- Outstanding work in Introduction to Programming (CS100)

2019-2020 ShanghaiTech comprehensive evaluation *December 2020*

- First place

2020 ShanghaiTech SIST outstanding teaching assistant *December 2020*

- Outstanding work in Algorithms and Data Structures (CS101)

The 2020 China Collegiate Programming Contest Mianyang Site *November 2020*

· Silver Medal

Tsinghua's 24th Intelligent Agent Competition *May 2020*

· Final Eight

2018-2019 ShanghaiTech comprehensive evaluation *December 2019*

· First place

The 44th International Collegiate Programming Contest Shanghai Site *November 2019*

· Silver Medal

The 44th International Collegiate Programming Contest Yinchuan Site *October 2019*

· Silver Medal

Tsinghua's 23rd Intelligent Agent Competition *May 2019*

· Final Eight

TECHNICAL STRENGTHS

Proficiency in programming language *C++, Python*

· Build network with Pytorch with no difficulty.
· Understanding of C++ in competition level.

Skilled in algorithms and data structures
Good knowledge of compiler and operating system