# **Zhuang Guan**

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### **EDUCATION**

University of Electronic Science and Technology of China, Chengdu, P.R.China

2017.9 - 2018.6 School of Computer Science and Engineering (Undergraduate)

2016.3 - 2018.6 Yingcai Honors College of UESTC (top 10% of students can apply to be a member)

2015.9 - 2016.1 School of mechanical and Electrical Engineering

GPA: 3.95/4.0 AVG.SCORE: 91.02/100 RANKING: 5/287

# **PROJECTS**

### TINYOS

[C & x86 asm] An operating system for x86 single-core computer

- · OS kernel equipped with modules of thread scheduling, process management, interprocess messaging, keyboard driver and file system
- Shell-like user interface and basic applications (cat, ls, text editor, ...)

VOXELW | [C++] A real-time voxel world renderer

- Procedural land generation based on Perlin noise and Voronoi diagram
- Global illumination model for voxel scene, supporting unlimited number of light sources and fast ambient occlusion
- · Skeleton animation and a tool for combining multiple animation file into one in user-defined format

OWE | [C++] A zero-overhead shader framework for DirectX11

- Flexible rendering pipeline specified by C++ template parameters
- Shader resource management based on D3D reflection

[C] An interpreter of a staticly typed programming language

- · Incremental garbage collection
- Higher-order function and closure

### **ACTIVITIES**

### 2017

National Undergraduate Training Program for Innovation and Entrepreneurship (member)

• Implemented the model generation algorithm for shadow art sculpture (Niloy J. Mitra & Mark Pauly, 2009)

## HONORS AND AWARDS

Outstanding Student Leader 2016

2016 Dongguan Hi-tech Zone scholarship

2017 People Scholarship (Third-Class)

The second prize in China Undergraduate Mathematical Contest in Modeling

### TECHNICAL SKILLS

Advanced:

Python, Matlab, Java, x86 Assembly, DirectX11, OpenGL3.+ Intermediate:

> Rust, Linux, LaTeX Basic:

# LANGUAGES

Mandarin: Native English: Fluent (TOEFL: 93)