Tom Smith

i@shuaitq.com · (+86) 151-1537-2806 · shuaitq · Tom Smith's

Educational Background

Harbin Institute of Technology at Weihai, Shandong, China 09/16 – Present

Undergraduate student in Computer Science and Technology, expected to graduate on 06/20

Professional Skills

- Programming Languages: C++ with C++11 = C > Java = Python = Go > Haskell > Rust
- A master of utilizing Linux which is used for daily development
- Proficiency in algorithms, data structures, operating systems, hardware structures, etc
- Love learning new skills and knowledge, and be happy to make friends

Project Experience

P2P virtual network interconnection 09/17 – 01/18

C, Linux Lab project, based on P2P network design, can penetrate some types of NAT and support multiple encryption algorithms to achieve secure interconnection across networks

- Participate in the design of UDP-based communication protocols and heartbeat packet mechanism
- Complete the first version of the server-side and client-side design in cooperation with the senior
- Participate in the design of multi-platform library architecture, referring to the implementation of DPDK's lock-free ring buffer

Secure WiFi App 01/18 – 02/18

Java, Android Lab project, according to the current network and credit list, the encrypted connection will open automatically to protect information security

- According to the art design, complete the interface effect and interface logic
- Dock with seniors' encrypted connection service to properly handle network handoff event

Personal Projects

MoonLight `https://github.com/shuaitq/MoonLight`

C++ A global illumination renderer using unbiased Monte Carlo path tracing

- Support for three camera models: perspective camera, fisheye camera and orthographic camera
- Support for three materials: glass, mirror and matte materials
- Render material roughness correctly

Aurora `https://github.com/shuaitq/Aurora`

C++ A software raster renderer

- Support for using json to define parameters such as scene, camera, light, and so on
- Adopt obj format model, ppm format texture, and support bilinear filtering
- Support both directional and point light
- Use Z-Buffer to ensure the correct order of rendering, and support back-face culling and triangle culling

Honors and Awards

3rd Prize, The 2017 ACM-ICPC China Shandong Provincial Programming Contest 05/17
2nd Prize, 21st National Olympiad in Informatics in Provinces - Hunan Division 11/15
2nd Prize, 20th National Olympiad in Informatics in Provinces - Hunan Division 11/14
3rd Prize, 19th National Olympiad in Informatics in Provinces - Hunan Division 11/13