

SHENGZE (Michael) ZHANG, Graphics Programmer

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EDUCATION

Carnegie Mellon University, Entertainment Technology Center Aug.2014 – May 2016

Master of Entertainment Technology

Shanghai Jiao Tong University, School of Software Sept.2010 – Jul.2014

Bachelor of Software Engineering

SKILLS

Languages: C, C++, C#, Java, Python, JavaScript, HTML5/CSS, HLSL, GLSL, VHDL

Game Engines/Graphics Libraries: Unity3D, UDK, Vision Engine, OpenGL, WebGL

Development Tools: Visual Studio, Eclipse, SVN, Perforce

Graphics Techniques: Ray Tracing, Antialiasing, Phong Lighting Model, Bump Mapping, Reflection/Refraction, K-D Tree, Subsurface Scattering, SSAO, Physically Based Rendering

AI Techniques: A*, Finite-state Machine, Backpropagation Neural Networks

PROFESSIONAL EXPERIENCE

Development Intern, Intel Asia-Pacific Research & Development Ltd. Shanghai, China

- Researched portable Virtual Reality equipment, from hardware to software Oct.2013 – Apr.2014
- Developed a VR rendering pipeline in Vision Engine

ACADEMIC EXPERIENCE

Building Virtual Worlds (BVW), Programmer Aug.2014 – Dec.2014

- BVW is an ETC course consisting of 5 rounds. Each round takes 1-3 weeks and is in team of random 4-6 people (programmer, 2D/3D artist, sound designer)
- Focused on visual and graphics effects, designed particle system and wrote new shader in Unity3D

Physically Based Skin Rendering, Summer Research Assistant in Digital Jun.2013 – Sep.2013

Art Lab (supervised by Prof. Xubo Yang)

- Researched simulation algorithms and parameter models of human skin with BSSRDF
- Applied Monte Carlo method of light transport in multi-layered tissues on the basis of subsurface scattering and absorption, and adopted a three-layer skin model with adjustable parameters
- Wrote a literature review and a technical document for the next steps in future research

Adventure Game 'Lock', Course Project in Game Programming Apr.2013 – Jul.2013

- Created a game containing a combination of adventure, puzzle and action elements with Unity3D
- Designed decryption clues and developed original shaders to enhance visual effects along with a combat system of monsters with AI, including an A* algorithm

QingYing, Intel Cup Entry & National Undergraduate Innovation Apr.2012 – Nov.2013

- Developed an interactive multimedia platform for creating and sharing with HTML5 technology
- Took charge of front-end development and designed the development tool
- 2nd Prize in the 5th National Collegiate Software Innovation Contest (Intel Cup)

ADDITIONAL INFORMATION

Volunteer in the 4th and 5th Game Developers Conference · China Dec.2010 & Nov.2011

Accordion with Grade 8 certification