Mohi Montazer

Motivated, **O**bjective, **H**ardworking, **I**nfluential

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EXPERIENCE

Senior System Software Engineer | NVIDIA | 2021 – Present

- Contributing to the video core driver for Windows (WDDM)
- Debugging the existing user-mode and kernel-mode video drivers
- Developing video processing library, including DXVA, H.264, HEVC, VP9, and AV1

Graphics Software Engineer | Qualcomm | 2017 – 2021

- Developing Android GPU drivers for Qualcomm Snapdragon SOCs
- Owner of Qualcomm GSL library
- Owner of Snapdragon Profiler OpenGL back-end
- Performance analysis, profiling, and optimizing drivers

Software Engineer | EpsilonnSoft | 2006 – 2009

- Developing customized accounting software for more than 100 clients
- Developing database software project for tracking national soccer team

EDUCATION

M.S. in Computing: Graphics and Visualization | 2013 – 2017

- University of Utah, Salt Lake City, Utah

B.S. in Software Engineering and Games Design | 2009 – 2013

- MMU University, Cyberjaya, Malaysia

SKILLS

Programming Languages / APIs

- Fluent in C++, C, OpenGL, GLSL
- Experienced in Python, Java
- Familiar with CUDA, DirectX, HLSL, Vulkan, SQL

Tools

- Visual Studio, Vim
- WinDbg
- CMake, GCC, Clang
- Git, Bash
- JTAG debugging, Hardware Bring-up
- Gerrit, Jira, Orbit
- UML

Other

- Computer graphics, Rendering techniques
- Ray tracing, Path tracing, Photon mapping, MLT
- GPGPU, Parallel processing

PROJECTS

ESX Drivers | 2017 – Present

- Qualcomm user-mode GPU driver for Android; OpenGL ES driver
- Supporting wide range of Qualcomm Adreno GPUs on Snapdragon SOCs
- Implementing new features for the GPU drivers and Snapdragon Profiler
- Performance analysis, optimizing, and debugging drivers for Adreno 600 series GPUs

GSL library | 2019 – Present

- Qualcomm's internal Graphics System Library; a unified interface between multiple user-mode drivers and multiple kernel-mode drivers on various platforms
- Packet consistency checker, memory allocator, and multiple debugging features

Blue Noise Virtual Point Lights for Global Illumination | 2017

- Master's Thesis: research project for a new rendering technique to render a scene using VPLs placed in the scene by the Poisson Disk Sample Elimination method

Image-Processing Class Projects | 2016

- Motion detection, histogram equalization, mosaicing

Ray Tracer | 2013

- Ray tracer capable of rendering triangles and spheres
- Supports reflections, refractions, textures, and depth of field

Photo-realistic Renderer Based on Metropolis Light Transport | 2013

- Undergrad Final Year Project
- Global Illumination renderer based on Metropolis Light Transport (MLT) algorithm
- Implemented in CUDA, capable of rendering objects, colors, and textures

Autonomous Data Collector Robot | 2012

- Robot collecting statistics on coverage of a simulated network signals in a city
- Participated in national robotic competition

Games | 2010 – 2012

- Thunder Tank: tower defense game; C# and XNA
- Snail Puzzle: platform game; C# and XNA
- Scorpion Killer: first person shooter game; C++ and DirectX

Tornado | 2006 – 2009

- Customized accounting software for stone factories
- More than 100 factories as customers
- Developed in C++ and MS SQL Server

FUTBAL | 2006 – 2009

- Database software project for the national soccer team
- Statistics, reports, news, articles about the national soccer team

PUBLICATIONS

The International Conference on Cyber Security, Cyber Warfare and Digital Forensic

- Combining Encryption Methods in Multipurpose Smart Card
- Comparison of ECC and RSA Algorithm in Multipurpose Smart Card Application
- All about Encryption in Smart Card

Montazerolzohour M., International Conference on Cyber Security, Cyber Warfare and Digital Forensic (pp. 43-48, 49-53, 54-59), Kuala Lumpur, Malaysia, 2012