POOYA EIMANDAR

January 7, 1986



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REFRENCES

Mohammad Hossein Rezvani, PhD

The Head of University of Applied Science and Technology National Foundation of Computer Games Branch

https://sites.google.com/site/moha mmadhosseinrezvani/home

SUMMARY

Founder and lead developer at <u>WolfSource.io</u>, member of <u>Microsoft Partner Network</u> and author of the book "<u>DirectX 11.1 Game Programming</u>" published by PackT. I graduated in computer science and hardware engineering degree from Shomal university and I'm one of the technical reviewers of the book "<u>Game Programming Using Qt:</u> <u>Beginner's Guide</u>".

I began my career working on various 3D simulation applications. My main research interests include but not limited to GPGPU, GPU-programming, parallel computing, simulators and game developing, however I have a great experiences on asynchronous backend message queue services.

Since 2010 until 2014, I was founder and senior lead developer of <u>Persian Game</u>

Engine at https://vimeo.com/channels/bazipardaz. Since 2014, joined AlAlam news network TV channels and I've started cooperating on their projects. From then on, I founded WolfSource and I've been working on Wolf.Engine and projects of WolfSource.

EXPERIENCES

2016 - Present Founder and Lead Developer

WolfSource.io

Wolf Source is passionate about 3D Graphics Technology. it is an in-house studio, working on games, game engine, 3D tools, backend services and TV broadcasting tools.

Projects:

Wolf.Engine: This the next generation of <u>Persian Game Engine</u> which is a cross-platform open source game engine. Wolf Engine written in C++ and support Python and Lua as an embedded script language. The Wolf used DirectX for rendering on Windows Win32 and Universal Windows Platform, however I'm working on Vulkan render engine for Android/Ubuntu, Apple Metal render engine for OSX/IOS and webGL for HTML5 platform.

(https://github.com/PooyaEimandar/Wolf.Engine)

- Wolf.PlayOut: This the a TV broadcast playout automation software
 which is currently using by AlAlam News Network TV and optimized
 based MOS protocol. The Playout developed based my in-house open
 source game engine called "Wolf engine" and is switchable between
 SD/HD/2K and 4K broadcasting formats.
 (https://www.youtube.com/watch?v=EZSdEjBvuGY)
- Wolf.CG: Plays simultaneous layers of dynamic graphics includes videos and images in real-time 3D/2D view for all broadcast. Wolf.CG supports inputs and outputs of both SD and HD to HD-SDI, HDMI and/or computer screens with key/alpha, including SDI-embedded audio. High-performance with asynchronous and multi-threaded I/O and paired with GPU-accelerated real-time rendering.

for more information, check out:

- http://WolfSource.io
- https://github.com/PooyaEimandar

2014 - Present Senior GPU programmer, software developer and project advisor

Alalam News Network channel TV

Generating new development tools for real time Playout & CG editor based on MOS protocol. Implemented with ffmpeg & pure DirectX 11.1 on windows 8\ 8.1\ 10 and which can be used on Windows 7(with platform update), also integrated with Decklink cards for real time capturing, cg editing and playbacking HD/SD medias. (Tested on Blackmagic Design DeckLink 4K Extreme card).

The graphical core of this application was achieved based on my next inhouse game engine, called Wolf Engine.

more information on http://wolfsource.io/

2014 - Present Member of IGDF jury panel for the best computer games technology IGDF.ir

Member of IGDF jury panel for the best computer games technology.

http://igdf.ir/

2014 – 2015 **Lecturer**

Iran Game Development Institute

Teaching following courses, C++, OpenGL ES and DirectX Programming, at Iran Game Development Institute.

www.irangdi.ir

2013 - 2015 **Lecturer**

The University of Applied Science and Technology National Foundation of Computer Games

Teaching following courses, C++, C#, GPU Programming, at the university of The University of Applied Science and Technology National Foundation of Computer Games.

2012 - Present Microsoft Partner

Microsoft Partner Network

Member of Microsoft Partner Network.

https://social.msdn.microsoft.com/profile/pooya%20eimandar

2011 – 2013 Project supervisor and adviser

Eirib.ir

Project supervisor and adviser at the department of IPTV game.

2010 – 2015 Founder and CEO

BaziPardaz

Founder, CEO at BaziPardaz. BaziPardaz Persian Tav is a knowledge-based company Ltd mainly focused on simulators and gpu based real time applications.

Also working as lead programmer of Persian Game Engine. The Persian Engine is the 3D game engine achieved by directX 9 and it was the core of projects of BaziPardaz. BaziPardaz published many projects during 2010-2015, include but not limited to:

- An open source Game Engine on http://persianengine.codeplex.com. Persian Engine was ranked second in the best technology of computer games of International Digital Media Festival & Fair 2011-2012.
- The third person shooter PC game named The Land (https://vimeo.com/106925703)
- An online virtual 3d city named City2. (https://vimeo.com/80917932)
- An interactive kinect PC game named Master Chef. (https://vimeo.com/93597108)
- A pipeline framework for Facial Animation between Persian Engine and Autodesk Softimage/Motion Builder (https://vimeo.com/83172048)
- An editor for Persian Engine (https://vimeo.com/79195038)

Channel of BaziPardaz on Vimeo: https://vimeo.com/channels/bazipardaz

2009 – 2010 Senior Silverlight Developer

Safa Rayaneh Co.LTD.

Developed an online CAD collaboration same as Autodesk Butterfly with XNA and Silverlight 5.

2008 – 2009 Senior DirectX Developer

Rasapardaz Co LTD.

Developing GUI of simulators with DirectX 9.

PUBLICATIONS

Jan 1, 2016 Game Programming Using Qt:

Beginner's Guide

PackT Publishing

I was one of the technical reviewers of the book "Game Programming Using Qt: Beginner's Guide" by Witold Wysota and Lorenz Haas.

https://www.packtpub.com/game-development/game-programming-using-qt

Jan 30, 2014 Learning Modern C++ for Game
Programmers

This is a totally free open source project devoted to teaching you to program in Modern C++, whether you've had any prior experience programming or not. This is studying project hosted for self-studying modern C++ beside game programming.

http://learningmoderncpp.codeplex.com/

Jan 27, 2014 The use of motion sensors in medical and health industry

Conference of Game & Medical

Health

An article about "The use of motion sensors in medical and health industry" for the first conference of Game & Medical Health.

Oct 11, 2013 DirectX Graphics Diagnostic

GameDev.net

An article about gpu graphics diagnosticon http://www.GameDev.net Debugging a captured frame is usually a real challenge in comparison with debugging C++ code. We are dealing with hundreds of thousands of more, pixels that are produced, and in addition, there might be several functions being processed by the GPU. Typically, in modern games, there are different passes on a frame constructing it; also, there are many post-process renderings that will be applied on the final result to increase the quality of the frame. All these processes make it quite difficult to find why a specific pixel is drawn with an unexpected color during debugging.

http://www.gamedev.net/page/resources/ /technical/directx-andxna/directx-graphics-diagnostic-r3380

2013 - Present **Blog for learning DirectX 11.1 Game Programming**

A dedicated blog for my book "DirectX 11.1 Game Programming".

http://directx11-1-gameprogramming.azurewebsites.net/

Aug 17, 2013 The book "DirectX 11.1 Game Programming" PackT Publishing

DirectX 11 is packed with features to meet the demands of modern gamers, multi-core processors, and the latest Microsoft operating systems. This book gives you access to all that with an example-led, user-friendly approach.

https://www.packtpub.com/game-development/directx-111-game-programming

SKILLS

- Project Management
 - Initiating the project
 - Planning the project
 - Executing the project
 - Monitoring and controlling the project
 - Closing the project
- Lead Development
 - Managing complex and high risk projects.
- Game/Simulator Development
 - Developing real time application for specific purpose.
- Preferred IDE/Code Editors
 - Visual Studio
 - XCode
 - Eclipse
 - Atom
- OS
 - Windows/Windows Phone
 - Linux
 - OSX/IOS
 - Android
- GPU Programming
 - DirectX
 - openGL ES
 - openGL
 - vulkan
 - Apple metal
 - GPU rendering algorithms
 - AR
 - VR
- Frameworks
 - PhysX
 - Bullet
 - 0MQ
 - RabbitMQ
 - QT

- Intel TBB
- Facebook Proxygen
- NginX
- Programming Languages
 - Assembly
 - C (gcc)
 - C++ (gcc/g++/MVC++/Intel C++)
 - HLSL/GLSL/Metal Shading Language/SPIR
 - golang
 - erlang
 - C#
 - Lua
 - Python
 - Swift
 - Javascript
 - XAML
 - HTML

EDUCATION

2004, 2008 Bachelor computer science

Shomal University

http://www.shomal.ac.ir/en/

LANGUAGES

- English: Full professional proficiency
- Persian: Native

INTERESTS

- Game developing
- New technology
- GPU rendering/programming
- GPU database
- Swimming
- Water Polo