# POOYA EIMANDAR



### **CONTACT**

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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/mohammadho sseinrezvani/home

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#### **SUMMARY**

Founder and lead developer at <u>WolfEngine.app</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: Beginner's Guide</u>".

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

Engine at <a href="https://vimeo.com/channels/bazipardaz">https://vimeo.com/channels/bazipardaz</a>. Since 2014, I founded Wolf Engine and I've been working on projects of Wolf Engine organization.

I was Lead Developer and Project Manager of Project Falcon, a real time, 3d simulator and monitoring system for ERP at FANAP.CO. and currently I'm leader of play.pod (The first cloud gaming & streaming platform in Middle East) which is developed based on Wolf.

### **EXPERIENCES**

#### 2016 - Present CTO and Project Manager

#### Fanap.ir

#### Projects:

- **Falcon**: A true real time 3D simulator and monitoring system for ERP is the next generation of monitoring systems
- PlayPod: I developed a cloud based real-time game streaming platform in order to play PC games anywhere on any platform over internet. https://play.pod.land

#### 2016 - Present Founder and Lead Developer

#### WolfEngine.App

Wolf Engine 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 is the next generation of <u>Persian Game Engine</u>, a cross-platform open source game engine. Wolf Engine is written in C++ and supports Python and Lua as an embedded script language. This is a set of C++ opensource libraries for read time rendering, real time streaming and game developing. (https://github.com/WolfEngine/Wolf.Engine)
- Wolf.PlayOut: This is the TV broadcast playout automation software that is currently used 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.

# 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 that 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, named Wolf Engine.

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

http://igdf.ir/

2014 – 2015 **Lecturer** 

**Iran Game Development Institute** 

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

#### 2012 – 2019 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 with the focus on simulators and gpu based real time applications.

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

- An open source Game Engine
   on <a href="http://persianengine.codeplex.com">http://persianengine.codeplex.com</a>. 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 (<a href="https://vimeo.com/106925703">https://vimeo.com/106925703</a>)
- 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 (<a href="https://vimeo.com/79210871">https://vimeo.com/83172048</a>)
- An editor for Persian Engine (https://vimeo.com/79195038)

Channel of BaziPardaz on Vimeo: <a href="https://vimeo.com/channels/bazipardaz">https://vimeo.com/channels/bazipardaz</a>

#### 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**

# March 6, 2018 The next generation of GPU APIs for Game Engines

Demonstrate about new pipeline of GPU APIs for developing real time game engine.

SlideShare:

https://www.slideshare.net/PooyaEimandar/the-next-generation-of-gpu-apis-for-game-engines-89840846

YouTube:

https://www.youtube.com/watch?v=w34s29HZ 50&t=1 7s

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 free open source project devoted to teaching how to program in Modern C++, regardless of any prior experience in programming. This studying project is hosted for self-studying modern C++ besides game programming.

http://learningmoderncpp.codeplex.com/

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

#### **Conference of Game & Medical Health**

Author of an article, titled "The use of motion sensors in medical and health industry" for the first conference of Game & Medical Health.

http://www.slideshare.net/PooyaEimandar/ss-38769072

#### Oct 11, 2013 DirectX Graphics Diagnostic

#### GameDev.net

An article about GPU graphics diagnostic on 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-and-xna/directx-graphics-diagnostic-r3380

# 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

### **EDUCATION**

2004, 2008 Bachelor computer science

**Shomal University** 

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

### **LANGUAGES**

• English: Full professional proficiency

Persian: Native

# PREFERRED PROGRAMING LANGUAGES

- C/C++
- HLSL/GLSL
- Rust/Go/D
- Python/Lua
- C# (I wrote many projects in C# but I'm not fan of .Net framework (3))

# **PREFERRED APIS**

- Vulkan
- DirectX
- Metal (via MoltenVK)
- OpenGL
- OpenCL
- WebGL
- Web Assembly
- TensorFlow
- RXCPP
- Boost

# **PREFERRED TECHNOLOGIES**

- Cloud gaming
- Cloud computing
- Realtime rendering
- Realtime computing
- Micro Services
- Al

# **INTERESTS**

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