

# POOYA EIMANDAR



## CONTACT



+98 - 912 - 527 26 33



Pooya.eimandar@live.com



PooyaEimandar.com



Pooya Eimandar



[linkedin.com/in/pooya-eimandar-9240a256](https://www.linkedin.com/in/pooya-eimandar-9240a256)

## REFERENCES

Mohammad Hossein Rezvani, PhD

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

<https://sites.google.com/site/mohammadhosseinrezvani/home>

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## SUMMARY

Founder and lead developer at [WolfSource.io](http://WolfSource.io), member of [Microsoft Partner Network](#) and author of the book "[DirectX 11.1 Game Programming](#)" 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 "[Game Programming Using Qt: Beginner's Guide](#)".

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 [Persian Game 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 is the next generation of [Persian Game Engine](https://github.com/PooyaEimandar/PersianGameEngine), a cross-platform open source game engine. Wolf Engine is written in C++ and supports 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 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.

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 that can be used on Windows 7(with platform update), also integrated with Decklink cards for real time capturing, cg editing and playbaking HD/SD medias. (Tested on Blackmagic Design DeckLink 4K Extreme card).

The graphical core of this application was achieved based on my next in-house 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.**

<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](http://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 – 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 with the main 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 <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/79210871>) (<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 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](http://www.gamedev.net/page/resources/_/technical/directx-and-xna/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
  - OMQ
  - 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