O
Senior GPU Software Engineer

SUMMARY

- Experienced GPU software developer with a wide range of 3D and image processing applications for the medical, entertainment, security and civilian industries; - Experienced in 3D graphics, GPGPU and VR for both mobile platforms(iOS, Android, Quest, Magic Leap) and desktops(Windows, Linux, Mac). - Proficient in: Java, Objective-C, Swift, C++, C#, js, Python. - Developed with: OpenGLES 2.0, CUDA, DirectX11, Unity, Unreal Engine, opencv, Matlab, WebGL, ThreeJs. - Implemented Structured Light camera, worked on Time of Flight camera and multi rig active stereo solutions(arena). - 15+ years commercial experience

TECHNICAL SKILLS

Main Technical Skills	Java, Objective-C, Swift, C++
Programming Languages	C#, C++, Java, JavaScript, Objective-C, Python, Swift
AI & Machine Learning	OpenCV
JavaScript Frameworks	three.js
JavaScript Libraries and Tools	three.js, WebGL
Platforms	Android, CUDA, Unity
iOS Libraries and Tools	ARKit
SDK / API and Integrations	DirectX
Operating Systems	iOS, Linux, macOS, Windows
Third Party Tools / IDEs / SDK / Services	MatLab
Web/App Servers, Middleware	OpenGL
Other Technical Skills	Unreal Engine

WORK EXPERIENCE

Algorithm developer, Multi station active stereo 3D scanner system

Duration: 2017-today
Summary: Algorithm developer on the GPU and CPU for tetavi/track160
Responsibilities: Development in CUDA a multi station active stereo 3D scanner system(3D arena). Did 3D Volumetric files streaming, compression of textures, mesh compression for

mobile and web apps. Developed in Unreal Engine and Unity for supporting apps and as data set for machine learning. Optimized DL Nets with NVIDIA TRT in Python.
Technologies: CUDA, Unreal Engine, Unity, Python, NVIDIA TRT

Lead Developer, AR prototype

Duration: 2016-2017
Summary: Lead Developer in Viseron as an AR and mobile expert
Responsibilities: Developed AR prototype using Unity for Android and iPhone. Used the new ARKit for iPhone and Tango for Android.
Technologies: Unity, ARKit, Tango

Software Engineer, 2D processing framework

Duration: 2012-2016
Summary: Software Engineer in Dropico as a GPU and mobile expert
Responsibilities: Developed the flag ship product's 2D processing framework from scratch using OpenGLES for iOS. Digital Ink. Developed Video capabilities for iOS apps. Ported the 2D processing OpenGLES framework from iOS to Android.
Technologies: OpenGLES, iOS, Android

Software Developer and Researcher, 3D Camera (Structured Light)

Duration: 2011-2012
Summary: Software developer and researcher at the CS GIP lab, The Technion
Responsibilities: Design, development and implementation of a 3D camera (Structured Light) based on client/server for Android, Linux and Windows. Research and development of 3D reconstruction algorithms and their implementation in CUDA. Development of new ideas to increase scanning and reconstruction in a 3D camera.
Technologies: Structured Light, CUDA, Android, Linux, Windows

Developer, 3D camera (Time of Flight)

Duration: 2010-2011
Summary: Developer in a Microsoft team, XBOX Israel
Responsibilities: Development of a framework for a 3D camera (Time of Flight) for the Kinect project.
Technologies: Time of Flight, Kinect

Developer, 3D camera

Duration: 2007-2009
Summary: Developer at CS GIP lab, The Technion
Responsibilities: Software development of a 3D camera using DirectX9(GPU) and C++. Developing GPGPU algorithms such as Active Stereo and Structured light. Implementation of advanced algorithms on the GPU. Applications for the security, medical and civilian industries. The camera got positive reviews and interest from leading companies in Israel and worldwide.
Technologies: DirectX9, GPU, C++, Active Stereo, Structured light

Game Developer, Game development

Duration: 2002-today
Summary: Developing games (independent)
Responsibilities: Developing games from scratch for mobile(iOS, Android) and desktop(Windows, Mac). Developed a “Single source” 3D graphics multi-platform framework that works on Android, iOS, Windows and OSX. Neural Networks Artificial behavior, collision

detection and physics algorithms.
Technologies: Android, iOS, Windows, OSX, Neural Networks

Software Developer and 3D animator, 3D simulator for sea navigation

Duration: 1999-2002
Summary: Software developer and 3D animator in the Navy
Responsibilities: Development of a 3D simulator for sea navigation in DirectX7 for multiple PCs communicating over the network. Modeling and animating 3D parts.
Technologies: DirectX7

EDUCATION

- **Bachelor Degree (B.A.)**
  Math and Computer Science, The Technion
  2002-2006

COURSES

- Differential Geometry(2012)
- Introduction to GPGPU, CUDA, Larabee,OpenCL(2009)
- Advanced Image Processing(2008)

PUBLISHED PATENT

- Volumetric video in web browser, 2022

PUBLISHED ARTICLE

- 3D-Color Video Camera, 2008