

Sagar Gandhi

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<http://sagar-gandhi.me>

Summary

Software Engineer with expertise in C and C++. Hands-on experience with cutting edge technologies such as Kinect for Windows, Intel Perceptual Computing and 3D Graphics programming. Great debugging skills and excellent knowledge of SDLC lifecycle and Agile methodologies.

Experience

Software Engineer	Persistent Systems, Pune, India	August 2013 – Present
<ul style="list-style-type: none">• Created Domain Oriented Gesture Library for Kinect for Windows. Worked as Lead programmer for gestures.• Built an app for Kinect for Windows which creates an ease for presentations using MS Powerpoint. For e.g. One can traverse through slides using simple gestures. Used COM Model, C++ language.• Built small Game using for Intel Creative Camera using Intel Perceptual Computing SDK.• Created an App for Speech Impaired which would help them in conveying message. Used OpenCV on Windows 7 platform. Porting it to Android is in progress.• Debugged Intel On-Chip Graphics Driver for Windows XP using WinDbg debugger. Primarily worked on 3D HAL module utilizing C programming language.• Developed 3D Game on Android platform using NDK, C++, STL to help children remember the number tables.• Presented internal working of Stereoscopic 3D Driver for Intel in “iShare – Company Internal Event” Won the “Most Popular Presentation” award		
Software Engineer	Sterling Systems, Pune, India	January 2013 – July 2013
<ul style="list-style-type: none">• Worked on Augmented Reality project for an innovative product. It targets the Education Industry directing a new way of learning.• Developed Polygon Reduction Tool, which reduced number of polygons by 50%-75% while maintaining original shape of the object intact using C++.• Developed real time Image Processing program for Camera Captured Images using C++• Developed real time Rendering program using OpenGL and C++.• Designed feature detection algorithms using Image Processing.• Developed Maximum Intensity Projection and Averaging ray-caster (Medical Imaging – Ray Tracing)• Used .vol volumetric data file and OpenGL raycasting to render a model.• Performed image manipulations such as Gradient computation, sample interpolation, shading, alpha blending using C++.		

Self Projects

- Engineered and programmed OpenGL-ES Engine for Android which supports Advanced Obj, MD2 file formats and Audio Support. Wrote Native code using C, C++.
- Built fire demo, water demo using GLSL ES on Android platform.
- Wrote GPU Profiler for AMD using C++ on Windows 7 to compute GPU statistics at runtime.
- Built 3D Action Game for PC from initial design to deployment, covering most of the topics in OpenGL. Used Qt for Window Management.
- Wrote small file-system filter driver for Windows XP. Explored and experimented with WDM and WDK.
- Developed Namespace Extension program for Windows Explorer using COM to get a custom effect of viewing files and folders.
- Performed in depth study of how OS and its components work. Wrote Boot-loader in C and x86 Assembly.
- Built small plug and port file system for Unix like systems.

Courses and Certifications

1. Machine Learning --- From Stanford University via Coursera
2. Image Processing --- From Duke University via Coursera
3. Image Processing --- From Georgia Institute of Tech. via Coursera
4. Parallel Programming (In Progress) --- By Nvidia via Udacity

Skills

Development Platforms: Linux, Windows, Android

SDKs and Libraries: WinAPI, Kinect for Windows V1, Kinect for Windows V2, Intel Perceptual Computing SDK, Intel RealSense SDK, OpenGL, OpenCV, OpenGL ES 2.0, OpenGL ES 3.0, COM, Android, STL, DirectX

Coding Languages: x86 Assembly, C, C++, Python, GLSL, GLSL ES, Core Java, Android

IDEs and Version Controls: Visual Studio 2008, 2010, 2013, Eclipse, SVN, git

Debuggers: WinDbg, Visual Studio Debugger, gdb

Blogs

<http://Sagar-gandhi.me/blog.html>

<http://inside-unix.blogspot.in>

Education

<u>Masters in Scientific Computing</u>	2013	School of Scientific Computing University of Pune, India.
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<u>Bachelor of Computer Science</u>	2010	University of Pune, India.
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