

# Mahendra Gopaludu Roopa

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## Education

- Masters in Computer Science with specialization in Computer Graphics at University of Bonn, Germany with a grade of *NA*.  
*2011*
- Bachelor of Engineering in Computer Science at Dr. Ambedkar institute of Technology, Bangalore, India with a grade of 70.8%.  
*2009*
- Pre-University study with specialization in Physics-Chemistry-Mathematics at P.E.S Pre-University College, Bangalore, India with a grade of 89.7%.  
*2005*
- High School study at Websters High School, Bangalore, India with a grade of 87.9%.  
*2003*

## Technical Skills

- Languages known : C++, C#, Python, Perl and Shell Scripting
- Knowledge about GPU programming languages CUDA, GLSL and HLSL
  - \* Worked on CUDA based ray tracers
  - \* A Neural Network to detect images for a robot's eye using CUDA
- Strong mathematical background in Computer Graphics material concepts of BRDF, BSDF & BTF and Volume Rendering
  - \* Cloth rendering using Optix based on sparse voxel octree
  - \* Car paint and hair rendering
- Proficient with concepts of OpenGL/DirectX, Qt, 8085/8086 assembly programming, BOOST libraries and MATLAB

- Proficient with IDEs and tools on both Windows and Linux platforms

## Experience

- Software Engineer at Nvidia Advanced Rendering Center, Berlin, Germany. *Nov 2011 - Present*  
Worked on : Shaders, BSDF/BRDF, Material definitions
- Master thesis on large scale medical visualization in a cluster based environment at mental images, Berlin, Germany. *Apr 2011 - Sep 2011*  
Worked on : C++, CUDA, DiCE
- As a graphics programmer for seismic data visualization at Fraunhofer Institute of Technology, Sankt Augustin, Germany. *Sep 2010 - Mar 2011*  
Worked on : C++, OpenSceneGraph, GLSL, Qt, Python, Android
- As a freelance programmer for a game on a map compiler and user interface design.  
Worked on : C++, GLSL, OpenGL
- A web search engine as a final year project in the Bachelors.  
Worked on : JAVA
- A simple C++ based car racing game as a 6th semester project in the Bachelors.  
Worked on : C/C++

## Other Interests

- Interested and passionate about real-time ray-tracing, reading literature on the same
- Support and promote open source software
- Playing games, listening ambient music