

# Rouslan Lyubomirov Dimitrov

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**My expertise is in computer architecture and rendering algorithms.  
My honor code is to be friendly and reliable.**

## Experience

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2016-present

### Principal Architect at NVIDIA Corp., Santa Clara, USA

- Technical lead / one of 4 developers for an unannounced technology solving a common VR pain-point.
- Lead architect for SLI (multi-GPU graphics).

2008-2016

### GPU Architect at NVIDIA Corp., Santa Clara, USA

- Lead architect for 2 features of the GeForce 10 series GPUs: Memory Compression and Raster Ordered Views.
- Led team of 7 engineers to implement the graphics portion of the GPU performance simulator.
- Wrote and maintain the NVIDIA waveform viewer and analyzer tool.
- Co-invented the NVIDIA G-SYNC monitor technology and the popular horizon-based ambient occlusion technique (HBAO) used in multiple AAA games: Battlefield, Far Cry.
- Filed 20 Patents.

2012 – 2014

### Satellite Designer / Founding Member at SkyCube.org

- We launched a nano-satellite in low earth orbit.
- I designed the main board containing the CPU, flash, RTC, I/O, power electronics.
- I designed the solar panel systems.

## Education

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### Imperial College London, UK

- M.Sc. in Visual Information Processing.
- Projects: *Brain Fiber Tractography: Tracing and Visualization* and *Portfolio Optimization with Profit Prediction* (Finance).

### Jacobs University Bremen, Germany

- B.Sc. in Computer Science and Electrical Engineering.
- Thesis: *Solid Environment Reconstruction on the GPU*.

### American College of Sofia (secondary school), Bulgaria

- Computer Science and Mathematics Profile.
- Senior Project: *Virtual Reality Campus Tour System*.

## Skills

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### Programming:

C/C++, x86 (+ SIMD) assembly, OpenGL, GLSL, Direct3D, HLSL, CUDA.  
Win32 API, Posix, Linux Kernel, Networking Stack and Protocols.  
Hardware, Driver and BIOS.

*Experience with:* HTML, Java, PHP, Perl, Python, and SQL.