

Lennert Schneider

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Senior Software Engineer

I have strong experience in software development with expertise in C/C++ and an extreme interest in natural sciences and qualitative simulations. I like to solve challenging problems and always strive to go beyond the current state-of-the-art by combining methods and ideas of different branches of research. I have also gained profound knowledge of sound-synthesis/analysis, complex dynamical systems and rendering.

Skills

Programming Skills

- 17 years of programming experience
- More than 12 years experience in C/C++ and code architecture, 9 years professionally
- Familiar with various other languages like C#, HLSL, CG, LUA, Pascal, Basic, HTML, ActionScript, x86 ASM, 68k ASM
- Experience with large projects and teams
- API experience with DirectX, CUDA, Steinberg VST, Win32/64, MFC, XNA
- Experience with parallel-architectures (MT, CUDA) and time-critical applications
- Experience in DLL usage, creation, binary-compatibility and plugin programming

Other Skills and Interests

- Excellent logical reasoning and problem solving skills
- Strong theoretical interest and over 7 years experience and empirical research of artificial general intelligence, artificial perception, computational neuroscience, pattern recognition, computer vision, neural networks, statistics and psychology
- Over 10 years experience, good conceptual understanding and plenty of implementations of all sorts of physical, biological and other feedback systems such as nuclear physics, astrophysics, chemistry, waves, light transport and scattering, fluids, rigid and soft bodies, genetics, evolution, body and brain function, lightning/thunder, fire, flocking and other natural phenomena
- Good understanding of global emergent behavior of a system from the interaction of its parts
- Over 10 years experience in computer graphics (on-and offline rendering) including rasterization, raytracing/raymarching, photon mapping, path tracing, (quasi) Monte Carlo methods, Metropolis-Hastings methods, volume/voxel raytracing, procedural textures and geometry

Software Skills

- Strong Visual Studio experience (10+ years)
- SVN/CVS/SourceSafe, JIRA
- Autodesk Softimage, 3DSMAX, Photoshop

Work Experience

Native Instruments GmbH, Berlin, Germany (2004 - today, Software developer)

- Development of „Traktor“, a professional DJ application
 - Large parts of the codebase are over 10 years old
 - High feature and release pressure
- Design and implementation of Traktor's new database, waveforms, browser parts, many smaller internal sub-systems and refactoring of various outdated parts
- Various feature implementations in Traktor
- Code maintenance
- More information about the product can be found at <http://www.native-instruments.com/#/en/products/dj/traktor-pro/>

Civil Service at Youth Hostel, Wannsee/Berlin, Germany (2003 - 2004)

- Caretaker and receptionist related work

Crytek GmbH, Coburg, Germany (2001 – 2003, Software developer)

- FarCry: Game code development (incl. LUA)
- CryEngine: Editor/Tool code development
- CryEngine: Sound and music engine design and development
- More information about the product can be found at <http://crytek.com/games/far-cry/overview>

Work Examples

For selected work I did in my spare time during the last couple of years please see my website: <http://www.causalloop.net>