Adrian Blumer

Curriculum Vitae

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Work Experience

2015   **Research Scientist at Carnegie Mellon University and Co-Founder at Kinema**, bringing research to industry in the form of technology for streamable interactive cinematic experiences. As one of two engineers on a five person team, I was responsible for gameplay design, server-side and tool engineering, as well as low-level multimedia programming using C++, C# and Python, with the result that we were able to translate fundamental research into a publishable product.

2014   **Research Internship at Disney Research Zurich**, working on precomputed light transport in the rendering group. Using C++ and Matlab I developed and combined experimental light transport algorithms with machine learning methods, while keeping a scientific journal of my findings.

2014   **Internship as a Software Engineer at Studio Gobo Ltd**, a UK based game studio, working on *Disney Infinity 2.0 Marvel Super Heroes.* Using a proprietary game engine and tools I delved in many aspects of video game development, targeting multiple platforms such as PS, Xbox 360 and PS3. My tasks ranged from engine development, over gameplay design to shader coding.

2011   **Internship as a Software Engineer at Cyfex AG**, a Zurich based company specialized in 3D software for medical applications. I worked with in-house C++ libraries and computational geometry algorithms, extending them both in terms of functionality as well as test coverage.

Education

2012 – 2014   **Master of Science in Computer Science at ETH Zurich**
Thesis: *Modular Radiance Transfer for Trees*
GPA of 5.57 (out of 6).

2008 – 2012   **Bachelor of Science in Computer Science at ETH Zurich**
Thesis: *Visibility Silhouette Level-of-Detail*
GPA of 5.19.

Selected Software Projects

2013   **Edge-Aware Image Filtering**, CPU implementation of a recent research paper for the *How to Write Fast Numerical Code* course at ETH, with a focus on low-level performance optimizations (source code).

2012   **Space Trouble!**, A multiplayer game for the Xbox 360 and PC platforms developed in a team of three for the *Game Programming Lab* course at ETH. Winner of both the audience and expert price at the end of the course (video).

2012   **Terrain Erosion**, A realtime fluid and erosion simulation written during the *Physically Based Simulation* course at ETH in a team of three. It won both the audience and expert price of the course-internal project contest (source code).

2012   **Path tracer**, An extensive renderer written during the *Image Synthesis* course at ETH. The final rendered image won the second prize in the rendering competition at the end of the course (report).

Skills

Linux, Windows, Android, Xbox 360, C++, Python, C#, Java, Eiffel, LUA, HTML, CSS, OpenGL, OpenCL, CUDA, MatLab, Blender, Amazon Web Services

Languages

German   mother tongue
English   full professional proficiency
French   elementary proficiency