

Adrian Blumer

Curriculum Vitae

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Work Experience

- 2015 **Carnegie Mellon University, Research Scientist**, I worked with Professor Adrien Treuille and Postdoctoral Researcher Matt Stanton on a new approach to large scale cloud based game precomputation and streaming. Working in an interdisciplinary team spanning three major universities I led the efforts in development of tools to analyze and modify large scale precomputed game graphs, low-level multimedia programming as well as gameplay design. This led to my role as co-founder in the San Francisco based startup *Kinema* and more recently the co-authorship in the Siggraph 2016 submission *Large-Scale Finite State Game Engines* with Matt Stanton, Adrien Treuille, Sascha Geddert, Paul Hormis, Seth Cooper and Andy Nealen.
- 2014 **Disney Research Zurich, Research Intern**, 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.
- 2014 **Studio Gobo, Software Engineer Intern**, 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. *Disney Infinity 2.0 Marvel Super Heroes*, the project I worked on shipped to customers worldwide, both on last and current generation consoles.
- 2011 **Cyflex AG, Software Engineer Intern**, I worked on the in-house C++ libraries and computational geometry algorithms, extending them both in terms of functionality as well as test coverage, with my contributions making it into the company's specialized 3D software for medical applications.

Education

- 2012 – 2014 **ETH Zurich, Master of Science in Computer Science**
Thesis: *Modular Radiance Transfer for Trees*
GPA of 5.57 (out of 6).
- 2008 – 2012 **ETH Zurich, Bachelor of Science in Computer Science**
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](#)).

Skills

Linux, Windows, Android, Xbox 360, C++, Python, C#, LUA, OpenGL, OpenCL, CUDA, MatLab, Unity, Amazon Web Services, Computer Graphics, Rendering, Network Programming, Machine Learning, HTML, CSS, Typescript, React

Languages

- German mother tongue
English full professional proficiency
French elementary proficiency