

Curriculum Vitae: BAERT JEROEN



Address:

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■ Redacted for web version. Contact me for full resume.

EDUCATION

- » **Master in Applied Sciences and Engineering: Computer Science: Human-Machine Interaction**
Catholic University of Leuven, 2010 : magna cum laude
- » **Bachelor in Applied Sciences and Engineering: Computer Science / Electrical Engineering**
Catholic University of Leuven, 2008 : cum laude
- » **High School : Option Latin / Mathematics**
Sint-Romboutscollege Mechelen, 2005 : cum laude

WORK EXPERIENCES

- » **Phd Researcher at Computer Graphics Group, Catholic University of Leuven – 2012 (current)**
Funded by a grant from the IWT (Agency for Innovation by Science and Technology). Promotor is Prof.Dr.Ir. Philip Dutré. PhD research focused on efficient construction and rendering of large data sets using a hierarchical voxel structure. Keywords: level of detail, octree, voxels, rendering.
More info: <http://www.forceflow.be/category/phd/>
- » **Software Engineer at eSaturnus – 2010-2011**
Developing NUCLeUS and Nebula, e-Health solutions based on video-over-IP. Writing backend code for distributed environments, front-end GUI design and implementation using GWT stack. Experience with in-depth software testing, release cycles and vicious bug-hunting.
- » **Team Manager at Zeropoint.it (Summer Internship) – 2009 – ref: Bart Van Loon (bart@ingen.be)**
Managing several large software projects, from requirements analysis to delivery. Organising meetings with clients and discussing technical details with the Pakistani branch of the company on a daily basis.
- » **Coder at ND/Interwave Studios – 2006-2009 – ref: Steve Etheridge (crispy@splashdamage.com)**
Nuclear Dawn is a total conversion for the Source game engine. I was in charge of developing the Linux server build, and worked closely with concept and 3D artists on prop design and map layout. In 2008, I was PR lead for the project and my work shifted to in-game effects.
- » **Cooking aid at Borgerstein VZW (student job) – july 2005**

SKILLSET

» Technology-related skills

Programming:

Proficient in C/C++/ OpenGL / CUDA and Java. Good Knowledge of JavaScript and PHP. Experience with Bash, Python, Ruby and Haskell.

Operating Systems:

Linux / Windows, both server and desktop environments.

Other:

(Libre)Office, LaTeX, Git/Svn/Mercurial. Matlab/Maple. Competent in 2D editing and design, pixel and vector-based (Gimp, Inkscape). Competent in sound / video editing. Experience with 3D modeling.

Technologies:

Practical experience modifying several video game engines (Source, UDK).

Experience with web application servers (J2EE, Oracle), databases (MySQL, OracleDB), CMS systems (Drupal, Wordpress, PmWiki) and other web technologies (HTML, CSS, XML, Flash).

Experience with 3D scanning and SFM computer vision algorithms.

» Languages

Fluent: Dutch (native), English.

Good: French.

Notions: German.

» Interests & Activities

Programming

Computer Graphics

Computer Games (design/implementation/playing)

Improvational Theatre / Comedy / Presenting (2nd place in Flemish Impro Cup 2008)

Cartoonist

EXTRACURRICULAR EXPERIENCES

» Presenting / Improvisation / Stand-up comedy – 2010-..

Hosting, presenting and performing at several events. Belgian Improvisation League, Famelab International, Youreca Science Challenge, Interfaculty Literary Prize, Radio Scorpio, The Joker Antwerp, Comedy Academy, ...

» Cartoonist at Veto – 2010-.. - ref: Veto editorial board (info@veto.be)

Curating and designing a weekly page of satirical cartoons on local and world news.

» Team Lead at Preparee – 2008-2009 – ref: Benjamin De Boe (benjamin@improrlando.be)

Organising and promoting events for the improv theatre group Preparee, based in Leuven.

Development and deployment of community backend for organising internal and external events, designing/managing the website and artwork creation. Artistic and organisational lead of the team.

» Coordinator at Vlaamse Technische Kring Revue – 2006-2009

Stage coordinator and technical support for an annual musical event organized by VTK, at the Catholic University of Leuven. Leading the stage crew, implementing technical support tools and creating artwork for promotional purposes.

ACADEMIC PUBLICATIONS

» ***Out Of Core Construction of Sparse Voxel Octrees*** - With P. Dutré and A. Lagae

High Performance Graphics 2013 / Computer Graphics Forum 2014

Developing an algorithm which allows out-of-core construction of SVO's using only a fraction of the memory required by an in-core algorithm, with the added benefit of being able to handle extremely large polygon meshes.

Info: <http://graphics.cs.kuleuven.be/publications/BLD13OCCSVO/>

» ***Suggestive Contours in Real-Time Applications*** – Promotor: Prof. Dr. Ir. Philip Dutré (2010)

Implementing, comparing and improving several algorithms to draw contour lines on meshes at interactive rates. Providing a GPU-accelerated implementation to improve performance.

Investigating the visual impact of contour lines on image perception and quality, as well as their application in computer games.

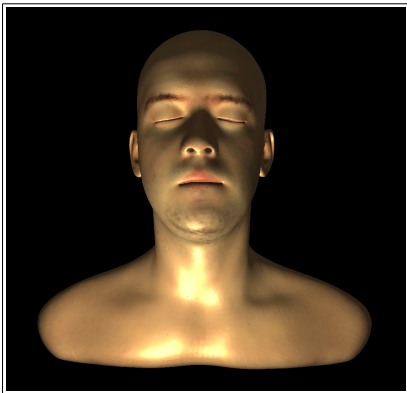
Info: <http://www.forceflow.be/thesis>



Real time rendering of augmented SVO



Visualisation of SVO construction



Interactive re-lighting of SVO model



Real time rendering of Suggestive Contours (Thesis)