

Pieterjan Bartels

SOFTWARE ENGINEER · COMPUTER GRAPHICS & VFX

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Experience

Double Negative VFX

London, United Kingdom

R&D SOFTWARE ENGINEER

Current, Since January 2017

- Developer on the Houdini R&D team, which provides pipeline tools and support for the FX department.
- Maintaining and adding functionality to large existing codebases, generally written in Python using Houdini's HOM.
- Occasional development in C++ with the Houdini HDK.
- Providing support for films such as 'Wonder Woman', 'Avengers: Infinity War', and 'Pacific Rim: Uprising'.

uMedia VFX & Finishing

Brussels, Belgium

PIPELINE ENGINEER

September 2016 - January 2017

- Short term contract as the sole developer in charge of creating a pipeline for the show 'I Kill Giants'.
- Mostly entailed Python programming, using APIs like PySide(2), PyMel, houdini HOM, and the Shotgun API on a daily basis.

Weta Digital

Wellington, New Zealand

LOOKDEV RESEARCHER

September 2015 - August 2016

- As a LookDev researcher, my job was to research and implement (in C++) new techniques to improve the shading and texturing pipeline. This included new material models (BRDFs), physical appearance acquisition, texture filtering, etc.
- Performed research for 'the BFG', 'War for the planet of the apes', and 'Valerian and the city of a thousand planets'

Agfa Graphics NV

Mortsel, Belgium

SOFTWARE ENGINEER (INTERN)

July 2013 & August 2014

- Responsible for all aspects of the development of an Image processing/computer vision application, using C++ and OpenCV, during two separate summer internships.

Robotics Research Group, KU Leuven

Leuven, Belgium

C++ PROGRAMMER

July - August 2012

- Summer job refactoring and adding functionality to the iTaSC task specification library, mostly in C++ and lua.

Education

MSc in Computer Animation and Visual Effects

Bournemouth, United Kingdom

NCCA, BOURNEMOUTH UNIVERSITY

September 2015

- Graduated with Distinction (75 %).
- Received the Academic Excellence Scholarship.
- Masters project regarding Position Based Dynamics, received a mark of 80 %.

Master of Engineering: Computer Science (MSc)

Leuven, Belgium

KU LEUVEN

June 2014

- Graduated Magna Cum Laude (80 %).
- Masters project regarding Global Illumination, received a mark of 95 %, was published as a poster at EGSR 2014, and as a short paper at EuroGraphics 2015.

BSc in Engineering

Leuven, Belgium

KU LEUVEN

June 2012

- Graduated Cum Laude (70 %).
- Major in Computer Science, minor in business management.

Academic Publications

ADAPTIVE LIGHTSLICE FOR VIRTUAL RAY LIGHTS

2015 **R. Frederickx, P. Bartels, Ph. Dutré**, Short paper at Eurographics 2015

LIGHTSLICE FOR VIRTUAL RAY LIGHTS

2014 **P. Bartels, R. Frederickx, Ph. Dutré**, Eurographics Symposium on Rendering (2014), poster

Software

Programming C/C++, Python, Java, JavaScript, HTML, CSS, XML, SQL, OpenGL/GLSL

Development QT, Boost, QtCreator, OpenCV, OpenImageIO, OpenExr, Eclipse, OpenMP, Intel TBB, Houdini HOM/HDK, Google Test, Nose, Eigen, Git, Jira, Crucible

Packages Houdini, Maya, Pixar's Renderman, Gimp, Nuke, Matlab, Maple, Disney's BRDF-Explorer

Skills & Interests

Technical:

- Computer Science & Programming
- Mathematics & Physics
- Physics Simulations for CGI
- Rendering & Global Illumination
- Reading, Analyzing and implementing Research papers
- Performance Engineering of Software Systems
- Image Processing & Computer Vision
- Human-Computer Interaction

Other:

- Problem Solving & Project Management
- Working as part of a team
- Communicating effectively
- Liaising with artists & artist supervisors
- Finding improvements to team atmosphere and workflow

Hobbies & Other Interests

Open Courseware

I enjoy reading course material or watching video lectures from services such as Pluralsight, edX and MIT OCW. This includes topics related to my profession as well as other fields.

Scuba Diving

I am a certified PADI advanced open water diver, and love spotting marine life in the wild.

Travelling

I love to travel the world and explore new places.

Running for Charity

I am currently preparing to run a half marathon as a way of raising funds for the UK Alzheimer's society.

Sports

I've played and watched team sports all my life, mainly football and basketball.

Games & Movies

I like to spend my free time playing board or videogames and watching series or movies.