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Software / Hardware Senior Engineer

Object-Oriented Analysis and Development.

Hardware Design and Development: design and development of devices and electronic circuits using micro controllers, sensors and actuators.

Also designs 3D mechanic parts for his and other people projects.

- Innovative software engineer offering eighteen years of experience in the full software development lifecycle – from concept through delivery of next-generation applications and customisable solutions.
- Expert in advanced development methodologies, tools and processes contributing to the design and rollout of cutting-edge software applications.
- Known for excellent troubleshooting skills – able to analyse code and engineer well-researched, cost-effective and responsive solutions.
- Well aware of all innovations in micro controllers, sensors, actuators, and other tech devices, knowledge that let him think about new devices and techniques for his own inventions and projects.

Technical Skills

Languages

C++ / STL / Java / Objective C / OpenGL / SL.

Tools

XCode / Visual Studio / Eclipse / Subversion / Git / CAD Eagle / Solid Works / Terminal.

SDK's

IOS / Android / openFrameworks / 3DSMax / Maya

Environments

Mac OSX / Linux / IOS / Android / Arduino / RBPi / Windows.

Employment details

Employer Casa Daros Latinoamerica LTD. Rio de Janeiro.
Position Technical Curator.
Dates Oct 2013 to Present.

Duties and Responsibilities

I am responsible for the maintenance of the exhibition works related to art and technology. I analyse the correct working of the engines , electrics , electronics ash mechanism of the art pieces, making the necessary fixes to maintain them during the exhibitions. Worked with pieces from: Julio Lepar'k, Marcelo Lozano Hemmer, Celina Portela, Hernesto Neto, Anna Linneman, Jose Damasceno.

References

Kaethe Walser
Technical Curator
walser@artinspace.ch

Employer EAV "Parque Lage", Rio de Janeiro, Brazil.
Position Tech Art Teacher
Dates Jan 2012 to Present

Duties and Responsibilities

Introduces new courses of Tech Art in the art school been part of the faculty of the technology Art Centre (NAT) in the most prestigious Rio de Janeiro Art School, Parque Lage. In his courses he is teaching artist how to program in c++ in his course Pixeling openframeworks course, and how to interact with micro controllers and learn electronics in his Arduino Introduction course.

References

Tania Queiroz
School Director
tania.queiroz@eav.rj.gov.br

Employer Mode2 studio. Rio de Janeiro, Brazil.
Position Senior Software Engineer.
Dates Oct 2013 to Dec 2014

Duties and Responsibilities

Development algorithms for sound synthesis and processing , including Auto BPM detection with tempo/beat sync, pitch control, filtering, equalisation.

References

Fabio Policarpo
CEO
fpolicarpo@mode2.com.br

Employer Pure and Apply Mathematical Institute, Rio de Janeiro.
Position Senior Software Engineer.
Dates Jan 2009 to Dec 2012

Duties and Responsibilities

Developing a multi projector mapping system for augmented spatial reality at the *visgraf* laboratory in the university. This system will let us add textures and illumination to real world objects, using several projectors. This project was presented at Siggraph 2012.

References

Dr. Luiz Velho
Visgraf Lab Director
lvelho@impa.br

Employer Hangar.org Barcelona, Barcelona.
Position Senior Software Engineer.
Dates May 2008 to Nov 2009

Duties and Responsibilities

Design and implementation of the Artificial Intelligence for the robots B.O.B, (surveillance cameras they are alive), from the artist Ricardo Iglesias. These Robots have been exhibited in Sonar festival Barcelona 2010, and F.I.L.E. festival Sao Paulo 2011.

References

Alex Posada
Lab Director
alex@hangar.org

Employer Pure and Apply Mathematical Institute (IMPA), Rio de Janeiro.
Position Senior Software Engineer.
Dates Mar 2007 to Apr 2008

Duties and Responsibilities

Design implementation and test of the system XMotion. The goal of this project was to create a system that lets a dancer design and control in real time the behaviour of the graphics projected and behind him while he dances. This software was presented in Siggraph 2008, and Euro Graphics 2008 conferences.

References

Dr. Luiz Velho
Visgraf Lab Director
lvelho@impa.br

Employer Alupan S.L. Segovia, Spain.
Position Technical Consultancy.
Dates Sep 2006 to Mar 2007

Duties and Responsibilities

Studies on how to improve the productivity in the company. I redesigned the database and hardware used in the company, and chose and implement new software to optimise the workflow of the employees. I did create a web page, and did the maintenance of the software and hardware in this period.

References

Manuel Lucio
C.E.O
manuel@alupan.es

Employer HoockUp3D.com, Rio de Janeiro.
Position Chef Software Engineer.
Dates Aug 2004 to Jun 2005

Duties and Responsibilities

Design and development of a character animation system (skeletal, facial, morph targeting, skinning) inside the game engine of the 3D video game.

I implemented some other components also:

Finite states machines for the characters A.I., Camera movement editor, Animations controllers, User interface, menus and events, 3DMax plugins for exporting: Character skeletal animations, Morph targets for skin and facial animation, skin modifier for character studio, chat machines

References

Anthony Lupidy
C.E.O.
tlupidi@yahoo.com

Employer Paralelo LTD, Rio de Janeiro.
Position GUI Software Engineer.
Dates Apr 2003 to May 2004

Duties and Responsibilities

Programmed an Action Script menu system that communicates with an Active X Control (that renders a 3D scene) inside an HTML. This system was used to navigate in a virtual walk through, inside STJ building in Brasilia, where the people that visit this building can get information and localise them self.

References

Fabio Policarpo
General Manager. Paralelo LTD
fpolicarpo@mode2.com.br

Employer Anticx Technologies LTD, Cambridge
Position Computer Graphics Software Engineer.
Dates Apr 2000 to May 2003

Duties and Responsibilities

Several projects in this company. In all of them, I've been responsible for the design, implementation, testing, and documentation.

Vectorial correction of a Non Photo realistic Render plugin for max in c++ using max SDK.

Macromedia output for this max render plugin using flash SDK.

Motion retargeting algorithm, which let character of different bone sizes to share the same animation.

States machine class that let characters and objects have different states, and let them play different animations depending of their states or states transitions.

Exporter plugin for 3Dmax, which let to export all the necessary information from max (geometry, textures, biped animations, mesh animations, physique-modifier, morph targets) to the company file system.

Chunks file system, used to store the extracted information from max.

Skinning of characters geometry using max physique information.

Vertex animation algorithms witch let's play vertex animations extracted from max in antics.

Lip-syncs vertex blending algorithm and Speech Recognition Software integration.

References

Mark Watt

Chief Software Engineer.

markwatt@gmail.com

Employer ReyesWorks - Telefonica I+D, Madrid.
Position Computer Graphics Software Engineer.
Dates Aug 1999 to Nov 2000

Duties and Responsibilities

The Development of reyesworks (an open source 3d library software)

My work involved the building and testing of speech recognition systems based on hidden Markov models and time delayed neural networks. This system was built using C++ .This neural network was feed up using a sound features extractor. This library analyses different features of sound files using different exponential transformations. The system is still used in the production of animations, to simulate facial movement through speech. The project was presented in Siggraph 1998.

References

Javier Reyes

General Manager. Reyes Infográfica.

Employer REM Infográfica Telefonica I+D. Madrid.
Position Computer Graphics Software Engineer.
Dates Jan 1997 to Nov 1999

Duties and Responsibilities

I was part of the development of some of the compare famous plugins like Cloth Reyes, Dirty Reyes.

I also develop algorithms for building some 3D primitive shapes.

Develop a tool for cleaning motion capture data and import it to Maya.

This was my first job and spend the most of the time learning SDK, OpenGL, C++, meshes, vertex, and other development tools.

References

Javier Reyes

General Manager. REM Infográfica

Education

2009-2012

PHD courses in computer graphics and imaging processing at Pure and Apply Mathematical Institute, Rio de Janeiro, Brazil.

2002

Course on installations with Lole de Freitas at EAV (Escola de Artes Visuais), Parque Lage), Rio de Janeiro.

1991-1998

Master degree in Applied Physics, specialisation in Electronics, Microelectronics and Semiconductors at "Universidad Autónoma de Madrid" (UAM).

Solo art exhibitions

2012

Glitterbot at Amarelo Negro Gallery, Rio de Janeiro.

Glitterbot, Galeria Amarelo Negro, Sao Paulo Art Fair.

Selected art exhibitions

2015

Tha Artist collaborative piece, Luciana Caravello Gallery Rio de Janeiro.

2014

Weiding Place, at Bota na Roda Festiva, Rio de Janeiro.

Harmonics series in BAB, Bienal de Buzios.

Cadaver Drawer, at Amarelo Negro Gallery, Rio de Janeiro.

2013

Feathers, Bota na Roda Festival, Rio de Janeiro.

Glitterbot at Glam exhibition at UERJ, Rio de Janeiro.

Angelos at MUV Gallery Rio de Janeiro.

2012

h34rt and Angelo at Rio de Janeiro Art Fair ArtRio.

oyster cube, at Multiplos exhibition, Amarelo Negro Gallery, Rio de Janeiro.

Time Shadow at Circo Digital Festival, Rio de Janeiro

2011

Glitterbot and Beat at Amarelo Negro Gallery, Rio de Janeiro.

purpuryBot & GlitterBot Contemporary Dance Panorama festival, Rio de Janeiro.

Fecundation, Installation at artRio exhibition in Bhering Factory, Rio de Janeiro.

Fecundation, Installation for the second Festival of Digital Culture Rio de Janeiro.

BOB A.I. , File Festival, São Paulo.

Gravity, Installation in "Abre Alas", Gentil Carioca Gallery, Rio de Janeiro.

purpuryBot e ePlant robots within Eletrico88 Project, MAC Museum Niterói.

2010

pornWalk installation at foxfo-box, Rio de Janeiro.

2009

Creates Cymatics interactive speaker.

Creates Faces interactive mannequin.

Creates Nike 6.0 interactive display; project Mesa Juliana, Peru.

Installation Soundwalk and Imanes for Sonar Festival, Barcelona.

Creates BOB AI for surveillance Robots.

2008

Ontem, Hoje Amanhã, Installation for the "Coordenadas y Apariciones" , by José Damasceno, Reina Sofia Museum, Madrid.

2007

Creates project Fluctuaciones at MediaLab, Madrid.

X-Motion, at Siggraph, Los Angeles.

shymoon installation at Moon Nights, Alcazar Castle, Segovia.

Awards and Grants

2011

National Research Center (CNPq) of Brazil to develop SAR.

2010

National Research Center (CNPq) of Brazil to develop the Shade Tank.

2007-2008

National Research Center (CNPq) of Brazil to develop the X-Motion system.

2006

Scholarship by AVAM to develop "Zapatos Sonoros".

