

Daniel Lélis Baggio

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EDUCATION

Instituto Tecnológico de Aeronáutica (ITA), São José dos Campos, SP, Brazil 2002 - 2006

Major: Computer Engineering **Grade:** 8.5/10.0

Honors and Awards: Google Summer of Code 2008 (Successfully finished project), FISL Programming Arena Finalist(2008), Google Summer of Code 2007 (Successfully finished project), Google Code Jam Latin America 2007 finalist, IBM InSites Second Place (2006), Best CiberMouse Undergraduate Team at IEEE RTSS (2006), ACM-ICPC Latin America Champion (2005), Golden Medal in Brazilian Programming Contest (2004), Honors in Physics – ITA (2002-2003), Honorable Mention in Brazilian Physics Olympiad (2001), Bronze Medal in Sao Paulo's Physics Olympiad (2001), Bronze Medal in I Advanced Physics School (2001), Bronze Medal in Brazilian Physics Olympiad (2000), Honorable Mention in Brazilian Physics Olympiad (1999)

Instituto Tecnológico de Aeronáutica (ITA), São José dos Campos, SP, Brazil 2006 - 2008

Master: Informatics – *GPGPU Based Image Segmentation Livewire Algorithm Implementation* (<http://code.google.com/p/gpuwire/>)

Instituto Tecnológico de Aeronáutica (ITA), São José dos Campos, SP, Brazil 2008 - Present

PhD: Informatics – Computer Vision related

SKILLS

Computer Skills

Software/Middleware & Databases: Emacs, gcc, g++, gdb, Cell Broadband Engine Simulator, GNU-Automake, Visual Studio, MatLab, MySQL, Flex, Microsoft Office XP, Open Office, Photoshop, Dreamweaver, Lotus Notes, Rational Rose Real Time, Rational Rose Clear Case, NetBeans, Eclipse, Kdevelop, IIS, Apache, SQLServer, Kile, Gimp, ImageJ, Wireshark (ethereal), Globus Tools, Condor

Programming/Scripting languages: C, C++, C#, Java, Python, Ruby, Pascal, Delphi, SQL, Perl, HTML, JavaScript, ASP, XML

Operating Systems: Linux, Windows XP, CE, 2000, Vista

Language Skills

Fluent in English, proficient in German(medium-1, DAAD). Portuguese as native language.

WORK AND RESEARCH EXPERIENCE

Aeronautical Computer Center, São José dos Campos, SP 2/2007 – Present

Software Designer

Designed software and managed a group of 4 Java developers for Brazilian Aeronautics Military Software Factory (www.ccasj.aer.mil.br/).

Developed the visual engine of an airplane simulator in C++.

Google Summer of Code 2008, Natural User Interface Group, Skelleftea, Sweden 6/2008 – 8/2008

Intern

The goal of this project is to create an enhanced human computer interface through the use of hand gesture recognition and head tracking. Several papers and approaches have been studied, implemented, and tested. Most of computer vision related algorithms are dealt through OpenCV library. More information about the project: <http://code.google.com/p/ehci/>

Google Summer of Code 2007, Northwestern University, Chicago, IL 6/2007 – 8/2007

Intern

The goal of this project was to summarize the function of each gene by using four keywords. This project was related to natural language processing, statistical data, bioinformatics, databases, and Ruby on Rails. Mentored by Dr. Simon Lin, from Robert H. Lurie Comprehensive Cancer Center of the Northwestern University. More information available at <http://code.google.com/p/genequad/>

Cell Broadband Engine Supercomputation Research Group, São José dos Campos, SP 6/2006 – Present

Research Group Leader

Co-funded a research group formed by 12 undergraduate students, focused on Cell Broadband Engine IBM Simulator, porting it to a Debian flavor of Linux as well as developing research projects in compilers, languages, optimizations and a distributed architecture for it.

Instituto do Coração (InCor), São Paulo, SP 8/2005 – 12/2006

Researcher

Research done in a medical environment, working with IVUS images, segmentation, electrograms, QRS complexes analysis.

Software Development

Software used to record pressure and heart high frequency signals, including graphical interface, signal analysis and real time processing.

Active Contour Model (Snakes) and Live Wire software implementation for image analysis and segmentation. Open Source software

developed is available at <http://sourceforge.net/projects/ivussnakes> and

graduation thesis written (<http://umn.dl.sourceforge.net/sourceforge/ivussnakes/TG.pdf>)

International Business Machines (IBM), São Paulo, SP 12/2005 – 3/2006

Extreme Blue Technical Intern

First Extreme Blue program made in Brazil. The program was focused on Embedded Software and Mathematical Models for analysis in a three month long summer job.

Stefanini IT Solutions Software Factory, São José dos Campos, SP 7/2005 – 11/2005

Software Developer Intern

Development in a Software Factory mainly focused on .NET solutions.

CASD-Vest Faculty Admission Test School, Voluntary Work, São José dos Campos, SP 2/2003 – 6/2005

Teacher

Physics and English Teacher, 2003-2005.

Director

IT Department Director, 2004-2005.

Instituto Tecnológico de Aeronáutica, São José dos Campos, SP 2/2002 – 12/2006

Robocup Rescue Simulation Team Leader, 11/2005 – 6/2006

Active member of ITANDROIDS team, writing papers and code for a robotic competition, being qualified for world finals in Bremen, Germany in June, 2006.

Training in Embedded Systems, 2/2005 – 6/2005

Embedded systems training course, DSP (Digital Signal Processing) and Microprocessors. Mainly focused on Blackfin Microprocessor.

Special Training Program, Scientific Initiation Scholarship, 2003-2004, 20 hours per week

Program offered to top 5 ITA students, focused in Mechatronics, including the study of prototypes as well as programming robots

Robot War Competition Member, 2002 - 2003

Competition aimed on developing remote controlled robots to fight until destruction. It developed technical skills to build radio controlled devices as well as motor assembling.

Software Development

RoboCup Rescue Agents: intelligent agent qualified for RoboCup finals in Germany, linked to Source Forge, 2006

Othello Player: development of an artificial intelligent board game player, using Neural Networks, 2005

Online Pong: online action game developed using JAVA RMI communication, 2005

Compiler: development of a C-like syntax compiler, using *Flex* and *Bison* tools, 2005

Grammar Parser from Chomsky Normal form to Greibach normal form, 2005

Hardware Development

Three-dimensional navigating system through a virtual labyrinth controlled by a binary console. 2003.

Thunder electromagnetic field detector. 2003.

Papers and Articles

“Alternative methods to calculate non-hyperemic parameters for coronary stenosis severity assessment” - BMES, Chicago, 2006

“Método Alternativo para Cálculo de Parâmetros Não-Hiperêmicos para Avaliação da Gravidade de Lesões Coronarianas” - Brazilian

Biomedical Engineering Congress, 2006

“ITANDROIDS-RS Team Description Paper” – RoboCup Rescue team description paper, 2006

“ITANDROIDS CiberMouse Agent Description Paper” - <http://ivussnakes.sourceforge.net/ITANDROIDS%20CiberMouse.pdf> , 2006

“Intravascular Ultra Sound Image Segmentation Algorithms” Graduation Thesis 2006

<http://umn.dl.sourceforge.net/sourceforge/ivussnakes/TG.pdf>