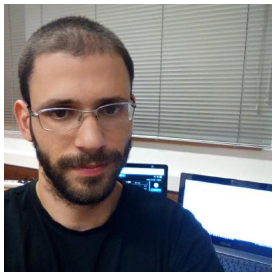

Gonçalo N. **Paiva Amador**

Lisbon, Portugal · *Portuguese* · *27/07/1983* · *Male* · *Single*

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"First, solve the problem. Then, write the code." John Johnson

Summary

Software Developer with 6 months of experience. Former Project Researcher, Laboratory Professor, and Scientific Presenter with over 9 years of experience. Highly motivated, communicative, self-sufficient, and versatile professional with solid academic background in Computer Science and Engineering, namely in: Game Engine Technologies, Teaching methodologies, HPC, Geometric Computing, and HCI. Known as a team player and constant self-driven learner; striving to address novel and exciting challenges. Preference to work with and/or manage teams in order to grow personally and professionally.

Research Interests

- Multi-touch, Voice and Camera-based HCI technologies.
- 3D Animation/Modelling and Geometrical Computing.
- Multi-Core CPU/GPU and Cloud computing.
- Computational Fluids Dynamics (CFD).
- Artificial Intelligence, Robotics, and Cybernetics.
- Computer Games & Gamification.

Skills

Programming/meta Languages & APIs/Frameworks:

- C/C++[4], C#[2][9], Java[4][8], shell scripting[4][8], MySQL[2], MS-SQL[2][9], jQuery/Ajax/JSON/Bootstrap[9], Angular2/4 & Node.js[9], OpenGL[4] CUDA/OpenMP/OpenCL/MPI[3] HTML/CSS/JavaScript/XML[3][9], UML[2], LaTeX[4].

Productivity tools:

- Git[3][9], SVN[2][9], Maven[2][6], Ant[4][8], Team Foundation Server[9], Eclipse[3][7], Netbeans[4][4][8], Visual Studio 2005-current[4][8][9], Visual Studio Code[9], MS SQL-server 2014-2016[2][9], Google Chrome[8][9].

Operating Systems Usage:

- MS Windows 2003-2008 server, XP - 10[8], Linux (Ubuntu, Mint, Fedora, and OpenSuse)[4][8], Android[8], CiscoIOS[13].

Academic: [1]>1 Yr, [2]1 - 2 Yrs, [3]3 - 5 Yrs, [4] 5+ Yrs
Professional: [9]>1 Yr, [10]1 - 2 Yrs, [11]3 - 5 Yrs, [12] 5+ Yrs

Personal Use: [5]>1 Yr, [6]1 - 2 Yrs, [7]3 - 5 Yrs, [8] 5+ Yrs
Training: [13]>1 Yr, [14]1 - 2 Yrs, [15]3 - 5 Yrs, [16] 5+ Yrs

Experience

Red IT (Professional)

Lisbon, Portugal

Software Engineer

August 2017 - Present

- **Context:** Adaptive, perfective and corrective software maintenance for an information management system used in the areas of social action and health , lets refer to it as X.
- **Functions:** Extension and maintenance of all Model-View-Controller (MVC) functionalities, including models, views, controllers, and SQL scripts to update and include new functionalities on X database. Functional and aesthetic bug resolution in views, controllers, and models of X.
- **Technologies:** TFS, jQuery, Ajax, JSON, Bootstrap, C#, MVC 5.0, MS SQL-server 2014, Visual Studio 2013.

Software Engineer

July 2017 - August 2017

- **Context:** Perfective and corrective software maintenance in the integration of a login functionality managed by Azure AD within a near release vacation management online solution, lets refer to it as Y.
- **Functions:** Study of Azure AD usage scenarios. Assessment of how could Azure AD be integrated in the at the time login process of Y.
- **Technologies:** Git, Angular2/4, JSON, Bootstrap, Node.js, C#, MVC 5.0, MS SQL-server 2016, Visual Studio 2017, Visual Studio Code, Azure AD.

Instituto de Telecomunicações and Graphics & Media Laboratory (Academic)

Research Associate for <PTDC/EIA/70830/2006, MOGGY - A Browser-Based Massive Multiplayer Online Game Engine Architecture> Project Mar. 2008 - Dec. 2011

- **Context:** Study and ultimately attempt to developed a game engine for MMOGs to work on the browser.
- **Functions:** Developed a game engine prototype in Java to test state management algorithms. Assisted in porting an existing multi-player game (Jake2) to a MMOFPS resorting to GridGain. Implemented fluid simulators in the GPU. Elaboration and public presentation of scientific articles.
- **Technologies:** Java 1.6, GridGain, Jgroups, JogAmp, Maven, Apache Math Commons, C/C++, CUDA 2.0, LaTeX, Beamer.

Universidade da Beira Interior (Academic) *Covilhã, Portugal*

Lab Instructor for the 11498-Computer Science and Engineering &
11156-Game Design and Development: Video Games Technologies Course Jan. 2012 - July 2016
and the 5385-Computer Science and Engineering: Computer graphics Course Jan. 2012 - July 2012

- **Context:** Lab. assistant in practical component of the video game technologies and computer graphics courses.
- **Functions:** Developed lab. course material, including practical sheets and tests (available upon request). Responsible for 0.5 hour lecture and supervision of 1.5 hour lab. Participated in practical project joint assessment with course supervisor.
- **Technologies:** Java 1.6-1.8, JmonkeyEngine, NetBeans, Whiteboard, LibreOffce, LaTeX, Beamer.

Research Associate for <POCI/V/04.01302/0155/0002/2006, "Metodologias Dinâmicas para o Sucesso em Matemática> Project July 2007 - Apr. 2008

- **Context:** Develop dynamic ways to dynamize a math department and math teaching at an university level.
- **Functions:** Creation of dynamic contents (presentations and work sheets) for theoretical and laboratory mathematics courses, i.e., dynamic presentations intended to make math learning more interactive and available outside the class room.
- **Technologies:** Blackboard, Mathematica, Matlab, LaTeX, Beamer.

Certifications

SAP *Online*

Design Your First App with Build* Oct. 2017 - Nov. 2017

- License openSAP
- Online Certificate
- Valid from Nov. 9, 2017 - Present

Developing Java-Based Apps on SAP Cloud Platform* April 2017 - May 2017

- License openSAP
- Online Certificate
- Valid from May 18, 2017 - Present

SAP HANA Cloud Platform* Essentials Feb. 2017 - March 2017

- License openSAP
- Online Certificate
- Valid from March 29, 2017 - Present

Extending SAP S/4HANA with SAP HANA Cloud Platform* Jan. 2017 - March 2017

- License openSAP
- Online Certificate
- Valid from Feb. 28, 2017 - Present

Cisco *Covilhã, Portugal*

CCNA Routing and Switching: Introduction to networks Oct. 2013 - Jan. 2014

- Cisco NetAcad
- Valid from Jan. 2014 - Present

Additional Information

Researcher with 9 international scientific articles published (1 journal and 8 conferences).
Keynote speaker at 8 technical, technological and scientific events.
B1/B Drivers license

Education

Department of Computer Science and Engineering, Universidade da Beira Interior — *Covilhã, Portugal*

PhD in Computer Science and Engineering (18/20 points) — Jan. 2012 - July 2017

- **Thesis:** Influence-based Motion Planning Algorithms for Games
- **Supervisor:** Professor Abel Gomes
- **Context:** PhD thesis consisting in the implementing a modular game engine in Java, suitable for teaching a video games and technologies course, and serve as a framework suitable to experiment with scene management for MMOGs. Latter, changed to path finding algorithms merged with influence maps.
- **Functions:** Gathering/analysis of state-of-the-art regarding scene management in virtual environments. Implementation of a modular game engine in Java (JOT). Implementation of techniques for state management in MMOGs. Integration of the proposed solution with a network simulator to test the solution(s) performance. Implementation of a novel pathfinding algorithm, and two novel techniques to integrate influence maps with pathfinders. Writing of articles, the thesis, and presentation, and oral presentation/defense of the former.
- **Technologies:** Java 1.6-1.8, GridGain, JGroups, JogAmp, Maven, GIT, Apache Math Commons, NetBeans, LaTeX, Beamer.

Bachelor's Degree in Information Technologies and Systems (15/20 points) — Sept. 2010 - July 2011

- **Final Project:** Seamless zoning algorithms for MMOGs over a Grid (18/20 points)
- **Supervisor:** Professor Abel Gomes
- **Context:** Bachelors final project consisting in extending with scene management techniques an existing Java video game, to explore grid computing frameworks and the possibility of converting multiplayer online video games into MMOGs.
- **Functions:** Gathering/analysis of state-of-the-art regarding scene management in virtual environments. Evaluation of communication, storage, and computation grid solutions (e.g., GridGain). Implementation of existing techniques into an existing video game. Writing of the project final report and presentation, and oral presentation former.
- **Technologies:** Java 1.6, GridGain, Apache Math Commons, JogAmp, NetBeans, LaTeX, Beamer.

Master's Degree in Computer Science and Engineering (18/20 points) — Sept. 2007 - Oct. 2009

- **Final Thesis:** Real-Time 3D Rendering of Water using CUDA (19/20 points)
- **Supervisor:** Professor Abel Gomes
- **Context:** Master's thesis consisting in the extension of a 2D fluids simulation algorithm to 3D in the GPU resorting to CUDA.
- **Functions:** Gathering/analysis of state-of-the-art regarding fluid simulation in virtual environments. Porting a 2D fluids simulation (Jos Stam Stable fluids) algorithm to 3D in the GPU resorting to CUDA. Writing of the thesis, scientific articles, and corresponding presentations. Oral presentation/defense of the thesis and of an article in a national conference.
- **Technologies:** CUDA 2.0, C/C++, Visual Studio 2005-2008, LaTeX, Beamer.

Bachelor's Degree in Computer Science and Engineering (13/20 points) — Sept. 2002 - July 2007

Secondary/High School of Peniche — *Peniche, Portugal*

High school Professional Degree in Electrotechnology and Electronics — Sept. 1998 - July 2001

Languages

Proficient User (CEFRL:C2): Portuguese (Native), English.
Basic User (CEFRL:A2): Spanish, French.