



# 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 in several programming languages, also with experience in primary technical contact point with one or more clients, assisting in planning, debugging, and supervising ongoing critical business applications. Former Project Researcher, Lab Instructor, and Scientific Presenter with 9+ Yrs of experience. Highly motivated, communicative, and self-sufficient professional with solid academic background in C.S. & Engineering, namely in: Game Engine Technologies, Teaching, 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.

## ⚙️ Areas of Interest

- Computer/Video Games & Gamification.
- Touch/Voice/Camera-based HCI technologies.
- 3D Animation/Modelling & Geometrical Computing.
- Mobile Applications Development.
- Artificial Intelligence, Robotics, and Cybernetics.
- Multi-Core CPU/GPU and Cloud computing.
- Computational Fluids Dynamics (CFD).
- Workforce scheduling & management software.

## 📊 Skills

### Programming/meta Languages & APIs/Frameworks:

C/C++<sup>[4]</sup>, C#<sup>[2][5]</sup>, Java<sup>[4][5]</sup>, ASP Classic<sup>[5]</sup>, Prolog<sup>[2]</sup>, OCaml<sup>[2]</sup>, shell scripting<sup>[4]</sup>, PL/SQL<sup>[5]</sup>, T-SQL<sup>[2][6]</sup>, JSP/jQuery/Ajax/JSON/Bootstrap<sup>[5]</sup>, Angular & Node.js<sup>[5]</sup>, Apache Struts<sup>[5]</sup>, OpenGL<sup>[4]</sup>, CUDA/OpenMP/OpenCL/MPI<sup>[3]</sup>, HTML/CSS/JavaScript/XML<sup>[3][6]</sup>, UML<sup>[2]</sup>, LaTeX<sup>[4]</sup>.

### Productivity tools:

Azure DevOps<sup>[5]</sup>, Team Foundation Server (TFS)<sup>[6]</sup>, Zendesk<sup>[5]</sup>, Redmine<sup>[5]</sup>, Git<sup>[3][5]</sup>, SVN<sup>[2][5]</sup>, Apache Maven<sup>[2][5]</sup>, Apache Ant<sup>[4][5]</sup>, Apache Tomcat<sup>[5]</sup>, LibreOffice<sup>[4]</sup>, Eclipse<sup>[3][5]</sup>, Netbeans<sup>[4]</sup>, Oracle SQL developer<sup>[6]</sup>, Visual Studio 2005-current<sup>[4][5]</sup>, Visual Studio Code<sup>[5]</sup>, MS Office Suite<sup>[6]</sup>, MS SQL-server 2012-2017<sup>[2][6]</sup>, PowerBI<sup>[5]</sup>, Skype/Skype for Business<sup>[5]</sup>, Google Chrome<sup>[6]</sup>, Internet Explorer<sup>[4][6]</sup>, Teamviewer<sup>[4][5]</sup>, SoapUI<sup>[5]</sup>, Postman<sup>[5]</sup>, Swagger<sup>[5]</sup>, IIS 6-8<sup>[5]</sup>.

### Operating Systems Usage:

MS Windows 2003-2016 server, XP - 10<sup>[4][6]</sup>, Linux (Ubuntu, Mint, Fedora, and OpenSuse)<sup>[4]</sup>, CiscoIOS<sup>[5]</sup>.

**Academic:** <1 Yr<sup>[1]</sup>, 1 - 2 Yrs<sup>[2]</sup>, 3 - 5 Yrs<sup>[3]</sup>, 5+ Yrs<sup>[4]</sup>

**Professional:** <1 Yr<sup>[5]</sup>, 1 - 2 Yrs<sup>[6]</sup>, 3 - 5 Yrs<sup>[7]</sup>, 5+ Yrs<sup>[8]</sup>

## 👜 Experience

### AMARIS (PROFESSIONAL)

Lisbon, Portugal

#### ASP classic Developer

June 2019 - Present

**Context:** adaptive, perfective and corrective banking software development.

**Functions:** developing T-SQL queries and jobs. Adaptive, perfective and corrective banking application development.

**Technologies:** Skype/Skype for Business, Internet Explorer, MS Office Suite, MS SQL-Server 2005, T-SQL, ASP classic, HTML/CSS/JavaScript/XML, Windows 10.

#### Java and Oracle Database Developer

Jan. 2019 - June 2019

**Context:** account migration among banks, adaptive, perfective and corrective banking software development.

**Functions:** inspecting PL-SQL queries, the sequence of queries, and then fine tuning those queries prior to sending data. Day to day support activities, investigate and address issues regarding quality of sent data with the business area. Adaptive, perfective and corrective banking software development.

**Technologies:** Redmine, Skype/Skype for Business, MS Office Suite, Apache AirFlow, Apache Ant, Apache Maven, Apache Tomcat, Apache Struts, Eclipse, Oracle SQL developer, PL-SQL, Java 6-8, Windows 7/10.

## Technical Account Manager

Feb. 2018 - Dec. 2018

**Context:** Primary technical contact point with one or more clients, assisting in planning, debugging, and supervising on-going critical business applications, Gamification and Workforce scheduling/monitoring for Contact Centers.

**Functions:** provide technical support for customers to support pre-sales and post-sales processes, address all product-related queries on time, create learning materials and train customers to use products effectively, assist in the creation of support documentation for existing software/service products, provide developers with customer's feedback to help identify potential new features or products, report on product performance, identify solutions to reduce support costs, analyze customer's needs and suggest upgrades or additional features to meet their requirements.

**Technologies:** Azure DevOps, TFS, IIS 6-8, VNC, mRemote, Cisco AnyConnect, FortiClient, Teamviewer, Skype/Skype for Business, WebEx, MS Office Suite, Postman, SoapUI, Zendesk, Internet Explorer, PowerBI, SSRS/SSIS/SSAS, MS SQL-server 2012-2017, T-SQL, Windows 7.

## REDIT (PROFESSIONAL)

Lisbon, Portugal

### Software Consultant

Jul. 2017 - Jan. 2018

**Context:** Adaptive software development and integration with Model-Based architecture for an energy sector company. Adaptive, perfective and corrective software maintenance for an information management system used in the areas of social action and health, Aka X. Perfective and corrective software maintenance in the integration of an Azure AD login functionality within a vacation management online solution, Aka Y.

**Functions:** Integration of Uber-like functionalities into existing Model-Based architecture modules. PL-SQL database replication. Integration, algorithm development, and prototyping of route calculation and schedule assigning software into existing Model-Based architecture modules. Extension and maintenance of all Model-View-Controller (MVC) functionalities to update and include new functionalities on X database. Functional and aesthetic bug resolution in views, controllers, and models of X. Study of Azure AD usage scenarios. Y login integration with Azure AD.

**Technologies:** Azure AD, Slack, TFS, Git, Visual Studio 2013 & 2017, Visual Studio Code, MS SQL-server 2014 & 2016, Oracle SQL developer, C#, T-SQL, PL-SQL, Angular2/4, JSP/jQuery/Ajax/JSON/Bootstrap, Node.js, JavaScript, Windows 7.

## INSTITUTO DE TELECOMUNICAÇÕES AND GRAPHICS & MEDIA LABORATORY (ACADEMIC)

### Research Associate for <PTDC/EIA/70830/2006, MOGGY - A Browser-Based Massive Multiplayer

Mar. 2008 - Dec. 2011

#### Online Game Engine Architecture> Project

**Context:** Study and ultimately attempt to Develop a game engine for MMOGs to work on the browser.

**Functions:** Develop a Java game engine prototype, to test state management algorithms. Assist in porting an existing multi-player game (Jake2) to a MMOFPS resorting to GridGain. Implement fluid simulators in the GPU. Elaboration and public presentation of scientific conference articles.

**Technologies:** NetBeans, GridGain, Jgroups, JogAmp, Apache Math Commons, OpenGL, CUDA/OpenMP/OpenCL/MPI Java 1.6, C/C++, LaTeX, Windows XP-7.

## 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:** Develop 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:** Whiteboard, LibreOffice, JmonkeyEngine, NetBeans, Java 1.6-1.8, LaTeX, Windows XP-7.

### Research Associate for <POCI/V/04.01302/0155/0002/2006, "Metodologias Dinâmicas para o

July 2007 - Apr. 2008

#### Sucesso em Matemática> Project

**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, Windows XP.

## Certifications

### SAP

Online

#### Build Mobile Applications with SAP Cloud Platform Mobile Services (227.8/300)

Aug. 2019 - Oct. 2019

Online Certificate: <https://open.sap.com/verify/xicav-sakyr-fopyh-kyfal-tunah>  
Valid from October 2, 2019 - Present

#### Object-Oriented Programming in Java (188.0/200)

June 2018 - July 2018

Online Certificate: <https://open.sap.com/verify/xocis-tyvip-gynuh-byneg-punel>  
Valid from July 25, 2018 - Present

#### Cloud-Native Development with SAP Cloud Platform\* (249.1/360)

Apr. 2018 - May 2018

Online Certificate: <https://open.sap.com/verify/xosen-nykel-vybup-susig-sihim>  
Valid from May 30, 2018 - Present

#### Design Your First App with Build\* (230.0/240)

Oct. 2017 - Nov. 2017

Online Certificate: <https://open.sap.com/verify/xoban-setyz-vogaf-leryz-lufor>  
Valid from Nov. 9, 2017 - Present

#### Be Visual! Sketching Basics for IT Business (70.7/80)

Sep. 2017 - Oct. 2017

Online Certificate: <https://open.sap.com/verify/xuhos-fogot-hytyc-pybin-helen>  
Valid from Oct. 12, 2017 - Present

#### Developing Java-Based Apps on SAP Cloud Platform\* (234.3/300)

Apr. 2017 - May 2017

Online Certificate: <https://open.sap.com/verify/xuhes-rimus-bikon-roper-hicom>  
Valid from May 18, 2017 - Present

#### SAP HANA Cloud Platform\* Essentials (300/360)

Feb. 2017 - Mar. 2017

Online Certificate: <https://open.sap.com/verify/xulor-nynoz-soped-muvuv-zitek>  
Valid from March 29, 2017 - Present

#### Extending SAP S/4HANA with SAP HANA Cloud Platform\* (254.0/360)

Jan. 2017 - Mar. 2017

Online Certificate: <https://open.sap.com/verify/xugal-vaseb-firih-zadyd-deniv>  
Valid from Feb. 28, 2017 - Present

### Cisco

Covilhã, Portugal

#### CCNA Routing and Switching: Introduction to networks

Oct. 2013 - Jan. 2014

Valid from Jan. 2014 - Present

## Education

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, UNIVERSIDADE DA BEIRA INTERIOR

Covilhã, Portugal

#### PhD in Computer Science and Engineering (18/20 points)

Jan. 2013 - June 2017

**Thesis:** Influence-based Motion Planning Algorithms for Games

**Supervisor:** Professor Abel Gomes

**Context:** Implementation of a modular game engine, suitable for teaching a video games technologies course. Path finding algorithms merged with influence maps.

**Functions:** Survey state-of-the-art regarding (i) modular game engine architectures, (ii) video game technologies teaching methodologies, (iii) influence maps and path finding algorithms. Game engine development (JOT). Implementation of a novel pathfinding algorithm, and two novel techniques to integrate influence maps with pathfinders. Writing of journal/conference scientific articles and thesis, presentation of conference articles, and thesis oral presentation/defense.

**Technologies:** GIT, NetBeans, Java 1.6-1.8, GridGain, JGroups, JogAmp, Apache Maven, Apache Math Commons, LaTeX, Linux Mint, Fedora, Ubuntu, OpenSuse, Windos XP-7.

#### Bachelor's Degree in Information Technologies and Systems (15/20 points)

Sept. 2010 - July 2011

#### Master's Degree in Computer Science and Engineering (18/20 points)

Sept. 2007 - Oct. 2009

**Thesis:** Real-Time 3D Rendering of Water using CUDA (19/20 points)

**Supervisor:** Professor Abel Gomes

**Context:** Extending 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 journal/conference scientific articles and thesis, presentation of conference articles, and thesis oral presentation/defense.

**Technologies:** Visual Studio 2005-2008, CUDA 2.0, C/C++, LaTeX, Linux Mint, Fedora, Ubuntu, OpenSuse, Windos XP-7.

#### 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

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**Proficient User (CEFR:C2):** Portuguese (Native), English.

**Basic User (CEFR:A2):** Spanish, French.

## Additional Information

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**Researcher** with 13 international scientific articles published (4 journal and 9 conferences).

**Keynote speaker** at 9 technical, technological and scientific events.

**B1/B Drivers license**