CURRICULUM VITAE

PERSONAL INFORMATION

Name	**Diogo Nuno Dias Mesquita Gomes de Andrade**
Address	**Av. Infante D. Henrique, nº13, R/C – C** **2910-530 Setúbal** **Portugal**
Telephone	**+351 96 3914593**
Email	**diogo.andrade@shadowcovenant.com**
Age	41
Nationality	Portuguese
Civil State	Married
Birthdate	03 / 09 / 1977
ID	10964025 de 09/09/2003, Arquivo de Identificação de Setúbal
Driver's License	L-17252547 de 28/03/2000, DGV Lisboa

PROFESSIONAL EXPERIENCE

- September 2018 ..
  - Name of employer
  - Office or occupation
  - Primary activities and responsabilities

Universidade Lusófona

Teacher

Teacher for the "Database" course
Teacher for the "Digital Game Development I" course
Support on several student projects

- February 2016 ..
  - Name of employer
  - Office or occupation
  - Primary activities and responsabilities

Fun Punch Games

Senior Software Engineer

Programming and game design on "Forge Quest" (mobile mid-core merge game with RPG mechanics), mainly the RPG engine, gameplay code, rendering and special effects.
Programming on "Billabong Surf Trip 2" (mobile surf game), mainly the network system, gameplay code, rendering, wave animation system and optimization for mobile.
iOS and Android port and build system for "Billabong Surf Trip 2".
Programming on "Strikers Edge" (console multiplayer battle arena game), mainly the realtime network engine, matchmaking, AI, shaders and visual effects, localization system and general gameplay programming.
PS4 port and build system for "Strikers Edge".
Steam integration for "Strikers Edge"
Writer on "Strikers Edge", building the background lore, character history and campaign storylines.

- February 2016 ..
  - Name of employer
  - Office or occupation
  - Primary activities and responsabilities

World Academy

Teacher

Teacher - 2d/3d Game Programming in Unity
Teacher – Gameplay coding for prototypes
Support on student projects

- October 2015 .. January 2016
  - Name of employer
  - Office or occupation
  - Primary activities and responsabilities

B5 Studios

Software developer

Porting of proprietary engine to PS4
Modern 3d rendering pipeline implementation on proprietary engine
Implementation and optimization of compute shaders, particularly GPU-based physics

Adaptation of GPU-based physics engine on Unreal Engine 4

• 2010...2015	
• Name of employer	Divitel Development Lda
• Office or occupation	Chief Software Architect
• Primary activities and responsabilities	Responsible for the technology departments of the company, in all its projects. System architect/developer for provisioning software System architect/developer for a DVB PSI/SI streamer Development of CUTV IPTV applications, including front-end (STB) and backend (data extraction/conversion/ingest/distribution) System architect/developer of a staging server for CUTV applications System architect/developer of VoD and EPG ingest systems System architect/developer of a multi-tenant hospitality solution (backend/frontend) System architect/developer of several integration tools for multi-vendor environments Development of application including video processing/encoding/generation Development of a multi-device conferencing video system (patent inventor on this technology) System architect/developer for Divitel's line of provisioning software and PSI/SI streamers

• 2003...2010	
• Name of employer	*Widecast Technologies, Ltd*
• Office or occupation	*Technology Director*
• Primary activities and responsabilities	Responsible for the technology department of the company, in all its projects. System architect for several services for DVB-C based STB (native stack development). R&D into creating a middleware for DVB/IPTV STBs Lead programmer, system architect for the server component of the Nexus Server (an MPEG/DVB generator for PSI/SI and EPG data). System architect for PSI Beacon (the general purpose extendable configuration tool for Nexus Server). Lead programmer and system architect for several GIS-based consulting solutions. Lead developer for an EPG editor tool. Requirement analysis/business support on all products/projects

• 2003...2010	
• Name of employer	Spellcaster Studios – Desenvolvimento de Software, Lda
• Office or occupation	Creative and Technology Director
• Primary activities and responsabilities	Responsible for the creative and technology departments of the company, in all its projects Software architect of the Spellbook engine, a cross-platform, data-driven game engine. Co-creator of the independent games "Shadow Stars: The Ventrui Belt" (space combat simulator) and "Something Fishy" (casual arcade game). Lead programmer and system architect for the game "Blitz and Massive" (3d graphic adventure) and "Ant Swarm" (strategy game). Lead programmer and system architect for Urban0, a system for data-mining GIS data from multiple sources and displaying it (in stand-alone applications, web through GoogleMaps, on GoogleEarth and through proprietary plugin). Creator and architect of several different game prototypes.

• 2003	January to December
• Name of employer	Cabovisão, SA
• Office or occupation	Subcontractor / Consultant
• Primary activities and responsabilities	Development of a provisioning, monitoring and helpdesk support system for the voice ports (phone systems – later also VoIP provisioning).

• 2001...	
• Name of employer	Câmara Municipal de Lisboa
• Office or occupation	Project Manager
• Primary activities and responsabilities	Research and development of the "Lisboa Virtual" project

• 2000/2001	August to January
• Name of employer	LaSEB – Laboratórios de Sistemas e Engenheiro Bio-evolucionária (IST)
• Office or occupation	Investigator
• Primary activities and responsabilities	Programming of signal analysis systems Author and programmer of project DCT (Divulgação Ciêntífica e Tecnológica – Interactive

educational CDs)

• 2000	April to August	
• Name of employer	AgilTec – Produção Ágil e Ecoeficiente, Lda (Lisboa/Portugal)	
• Office or occupation	Investigator	
• Primary activities and responsabilities	Research of web interfaces for remote industrial control and monitoring Website development Research and development of virtual reality systems for production methods analysis	

• 1999/2000	March to February	
• Name of employer	Eurogames – Software Educativo e Lúdico (Barreiro/Portugal)	
• Office or occupation	Project Manager / Lead Programmer	
• Primary activities and responsabilities	Development of the child's game "Batatoon", from design to programming	

• 1998/1999	August to July	
• Name of employer	MIND, Multimédia Industrial, Lda (Lisboa/Portugal)	
• Office or occupation	Developer	
• Primary activities and responsabilities	Collaboration on the graphic interface programming for a monitoring application of river volumes (for Civil Protection/Water Institute) Developing of planification of 3d volumes onto 2d for use in ShoeCAD Website development Educational game development	

• 1996		
• Name of employer	Editora Pergaminho, Lda (Cascais/Portugal)	
• Primary activities and responsabilities	Development of a mailing application	

• 1994		
• Name of employer	Cambitur – Agência de Câmbios (Lisboa/Portugal)	
• Primary activities and responsabilities	Developing of a currency exchange program	

ACADEMIC AND PROFISSIONAL FORMATION

• 1995-2000	
• School or Institute	Instituto Superior Técnico de Lisboa – Universidade Técnica de Lisboa
• Degree attributed	Degree in Software Engineering, CS programming major (final average 15/20)
• Primary valences	Creation of the end-of-degree project "Specification and Implementation of a Tool to Create Multi-platform Multimedia Products" (end-grade 19/20)
Notes	In the current pan-European education system, my degree corresponds to a Master's degree.

• 2003	September
• School or Institute	Environmental Systems Research Institute, Inc.
• Degree attributed	Introduction to ArcGIS – Levels 1 e 2

• 2003	Dezembro
• School or Institute	Galileu – Serviços e Tecnologia, SA
• Degree attributed	Programming Microsoft Visual Basic .NET

PATENTS

2015	Working for Divitel Development, Lda, credited as inventor for the patent for "A method and system for two-way A/V-communication" (*https://divitel.com/divitel-awarded-patent-two-way-av-accessibility-technology-2/*) – N2014695 (*https://worldwide.espacenet.com/publicationDetails/biblio?II=1&ND=3&adjacent=tr*

PERSONAL APTITUDES AND SKILLS

TECHNICAL APTITUTES AND SKILLS

- **Online portfolio available at http**://www.shadowcovenant.com/portfolio
- **APIs** – Mainly DirectX (from 5.0 onwards) and Win32, but also OpenGL, SGI, O3D, standard POSIX, STL, wxWidgets, 3d Studio Max API, FMod, Freetype, libcurl, FFmpeg, GStreamer, Lua API, Marmalade, Phonegap, and many, many others.
- **Engines and Tools** – Expert Unity, Intermediate Unreal Engine 4, Beginner 3DS Max, Intermediate Photoshop
- **Programming** – Expert C/C++, C#, LUA (scripting and binding side), mid-level Javascript, Java and PHP. Many others, including Assembler (with experience in Z81, X86 and M68000), Perl
- **Front-end development for web and smart devices**
  - Set-Top Boxes (with middleware and native stack)
  - Smartphones (Android and iOS)
  - Tablets (Android and iOS)
- **Low-level embedded systems architecture and development**
- **OS's** – Windows based, Linux (mainly Debian, but some Red Hat, Fedora and CentOS), Unix (Solaris), MacOS, Android, iOS. Cross-platform development experience in all of these platforms
- **Databases** – MySql, Postgres, Microsoft Sql Server
- **Other** – Google's GIS ecosystem (GoogleMaps, SketchUp, GoogleEarth), large-scale data-set rendering, procedural content, data mining and cleanup, data integrity systems, redundant system design, VR-systems (old ones, pre-2005)
- **Tools**: Pix, VTune, Glowcode, gDebugger
- **Extensive experience with system integrations and protocols**
  - Analog and digital telephony
  - DVB
  - Multiplexers/QAM/Receivers: Ericsson/Tandberg, Scientific-Atlanta, AppearTV, etc
  - STBs
  - Content Management systems (mainly Seachange and proprietary solutions)
  - Billing/Rating-engine systems (internal development)
  - CRM systems (internal development)
  - HTTP/Telnet/FTP, both clients and servers from a development/programming perspective
  - REST/SOAP APIs, also from a development perspective
  - Web-technologies in general (HTML/CSS/PHP/GWT)
  - Reverse-engineering of undocumented protocols
- **Programming areas of expertise and interest –** Data-driven software design, systems integration, graphical engines, procedural content generation, compilers.

| CLASSES AND PRESENTATIONS GIVEN | Was guest speaker in a series of events and conferences, like: |

- Multimédia XXI (2000 – Realtime 3d visualization techniques)
- Future Gaming (2004 – Game Design – Past, Present and Future)
- ETICnology (2004 – From concept to game model)
- Games'2004 (2004 – Research and Development of video-games in Portugal)
- Technological School of Castelo Branco (2005 – Game development – An engineer perspective)
- Technological School of Setúbal (2005 – System Integration – A case study)
- Games'2006 (2006 – The Portuguese Game-Development Scene Status)
- MyGames (2007 – Blitz and Massive – A Graphic Adventure Made in Portugal)
- Digitel Games 2008 (2008 – Round table moderation about the gaming industry in Portugal)
- Minho University (2008 – Communication and Games)
- Jortec'09 (2009 – Spellbook: Multiplatform Data-driven Game Engine)
- Videojogos 2009 (2009 – R&D: Formal and Informal)
- Catholic University of Lisbon (2010 – The Game Industry)
- ISCTE - Lisboa Games Conference (2017 – Multiplayer on Strikers Edge)
- Game Dev Camp 2018 (2018 - Multiplayer on a Budget)
- World Academy (2018 – The Portuguese Videogames Industry)
- Universidade Lusófona (2018 – Making a Game in 40 minutes)

SOME PERSONAL PROJECTS

- Games
    - o Gateway: Chronicles of Steve
    - o Grey: Shadow of Calabeth
    - o Shadow Stars: Arena
    - o Something Fishy
- Tools
    - o 3d Studio Plugin Suite
    - o Voxel Map Editor
    - o GI-based Lightmap Generator
    - o AO-based Lightmap Generator
    - o SurgEd: Full editor suite
- Jams: Regular participant in Ludum Dare 48-hour competitions, and Global Game Jam
- For a more comprehensive list, please visit http://www.shadowcovenant.com/portfolio

ORGANIZATION APTITUTES AND SKILLS

Was co-organizer of Games'2004, one the first conferences of academic and industrial interest in Portugal about videogames in different perspectives.
Was First-Secretary of APROJE (Portuguese Game Developer Association).
Was lead software engineer on pan-disciplinary on lots of different projects, in such different areas as system integration, games and GIS.
Was officer, raid leader and guild-master on several World of Warcraft guilds.

PRIMARY LANGUAGE

Português

OTHER LANGUAGES

	English	**French**	**Spanish**
• Reading	Excelent	Elemental	Average
• Writing	Excelent	Elemental	Elemental
• Speaking	Excelent	Elemental	Elemental

INTERESTS

Programming, game development, game playing, game design, data-driven systems, complex and multi-tiered end-to-end software architectures, music, movies, philosophy.