# Pedro Bessa

Software Engineer

Porto, Portugal pedrobessa.dev linkedin.com/in/pedrofnbessa github.com/tamanegicode

#### Summary

Software Engineer with 5+ years of professional experience developing cross-platform applications, primarily in game development using Unity and C#. I hold a bachelor's in Game Development and a master's in Computer Engineering, a combo that's given me both creative grounding and strong technical foundations. Contributed to 8 shipped titles in a professional capacity, 5 of which I supported from concept to release. Driven by curiosity and a constant desire to grow, I actively seek out ambitious projects that challenge me, whether that means tackling complex problems or diving into new technologies and unfamiliar tech stacks. Open to global relocation for the right opportunity.

#### Experience

Virtual Campus Lda.
Programmer
Proto, Portugal
https://virtual-campus.eu

- Developed cross-platform games targeting PC, Mac, Linux, Android, iOS, WebGL, and Meta Quest (VR) in an Agile environment.
  - Built and maintained core gameplay systems and functionality of games developed as part of larger projects co-funded by the European Union.
  - Took ownership of full project lifecycle on select titles, from initial prototype to deployment.
  - Collaborated with the art team to import, configure, and integrate 3D models, animations, and other visual assets into production-ready scenes.
- Optimised a Unity-based project for the University of Thessaly's Creative Technologies Learning Lab, achieving nearly 2x performance improvement.
- Mentored a junior programming intern, introducing best practices and guiding them through their first steps into game development.
- Provided Unity onboarding and workflow support to a graphic design intern, helping bridge the gap between visual design and implementation.

# GILT - Games, Interaction and Learning Technologies Programmer

May 2017 – April 2021 Porto, Portugal

https://gilt.isep.ipp.pt

- Developed cross-platform games targeting PC, Mac, Linux, Android, and iOS.
  - Implemented core gameplay systems and mechanics based on design specs and iteration feedback.
  - Translated abstract design concepts into implementable gameplay features and UI/UX interactions.
- Maintained and updated legacy projects to ensure compatibility with modern devices and platform compliance (Google Play Store, Apple App Store).

## Skills

## **Professional Experience**

C#, Unity, Git, PlasticSCM, Visual Studio, Vuforia, Virtual Reality (VR), Augmented Reality (AR)

# Additional Experience

C, C++, Java, Objective-C, JavaScript, HTML5, CSS, Android Studio, Xcode, Unreal Engine, MonoGame, libGDX, raylib, HLSL, MySQL, phpMyAdmin

# Education

## Instituto Superior de Engenharia do Porto

Master's Degree

Computer Engineering – Graphics Systems And Multimedia

https://isep.ipp.pt

## Instituto Politécnico do Cávado e do Ave

Bachelor's Degree

Digital Games Development Engineering

https://ipca.pt

# Publications

# Developing Emotional Intelligence with a Game: The League of Emotions Learners Approach

August 2021

Santos, J.; Jesmin, T.; Martis, A.; Maunder, M.; Cruz, S.; Novo, C.; Schiff, H.; Bessa, P.; Costa, R.; Carvalho, C.V.d.

https://doi.org/10.3390/computers10080097

# Creating Competitive Opponents for Serious Games through Dynamic Difficulty Adjustment

March 2020

Kristan, D.; Bessa, P.; Costa, R.; Vaz de Carvalho, C. https://doi.org/10.3390/info11030156

## Developing Entrepreneurship Skills with a Serious Game

June 2019

Vaz de Carvalho, C., Costa, R., Bessa, P., Monterrubio, L., Santos, J. https://doi.org/10.1007/978-3-030-22602-2\_26

# LearnIt: A Serious Game to Support Study Methods in Engineering Education

May 2019

C. V. de Carvalho, P. Bessa, R. Costa, A. Barata and A. Costa

https://doi.org/10.1109/EDUCON.2019.8725109

#### **Projects**

#### GaGEN

A hidden object game that aims to teach about climate change through intergenerational play.

https://virtual-campus.eu/gagen

Tools: Unity, C# | Platforms: PC, Android, iOS, Web Browser

**Snappy Witch** 

Side-scrolling game based on Flappy Bird. https://tamanegicode.itch.io/snappy-witch

Tools: C++, raylib | Platforms: PC, Web Browser

#### **FLER**

Virtual escape room with the purpose of enhancing financial literacy among adults.

https://flerproject.eu/game

Tools: Unity, C# | Platforms: PC, Web Browser

#### **NATURE**

City builder aimed at teaching higher education students about management of natural resources and environmental sustainability. <a href="https://ctll.e-ce.uth.gr/index.php/nature">https://ctll.e-ce.uth.gr/index.php/nature</a>

Tools: Unity, C# | Platform: PC

#### XR Skills

Virtual Reality game designed for teachers and educators to improve stress management skills.

https://xrskill.infoproject.eu

Tools: Unity, C# | Platforms: PC, Meta Quest

## 270 Seconds

Augmented Reality app developed for an art presentation that explores the theme of brain death.

https://github.com/ShenanigansInc/270-seconds

Tools: Unity, Vuforia, C# | Platform: Android

#### **DeStress**

3D dialogue-based game about coping with stress at the workplace.

https://destress.eu/en/outcome-2

Tools: Unity, C# | Platforms: PC, macOS

# LOEL - League of Emotions Learners

Game for children and young teenagers that focuses on developing emotional intelligence through varied minigames and gamified activities.

https://virtual-campus.eu/vc\_product/loel

Tools: Unity, C# | Platforms: Android, iOS

#### Transform@

Board game centered around entrepreneurship in rural areas.

https://virtual-campus.eu/vc\_product/transform

Tools: Unity, C# | Platforms: PC, Web Browser

# LearnIt

Collection of brain-training minigames created for Instituto Superior de Engenharia do Porto students.

Tools: Unity, C# | Platforms: PC, Android, iOS

## **Project Snatcher**

2D stealth game for Android devices.

https://tamanegicode.itch.io/project-snatcher

Tools: Java, libGDX, Android Studio | Platform: Android

#### Tanks!

3D tank battle game prototype.

https://github.com/tamanegicode/tanks

Tools: C#, MonoGame | Platform: PC

## Certifications

# Certificate of Proficiency in English

Cambridge Assessment English

CEFR Level C2, Grade A (Score 225/230)

#### Languages

## Portuguese - Native

English - Full professional proficiency (C2 CEFR)

#### Others

Delivered introductory lectures on Unity game development for a master's program at Instituto Superior de Engenharia do Porto, by faculty invitation.

December 2022