Pedro Bessa

Software Engineer

Porto, Portugal | linkedin.com/in/pedrofnbessa | github.com/tamanegicode

Summary

Software Engineer with 5+ years of experience developing cross-platform applications, with a strong focus on game development using Unity. Worked on a total of 8 projects in a professional capacity, 5 of which with involvement from the very early concept stages all the way to completion and release. Passionate about learning new technologies and determined to grow as a programmer. Eager to tackle increasingly ambitious and challenging projects. Willing to relocate on a global scale.

Experience

Virtual Campus Lda.   April 2021 - Present
Programmer / Unity Developer   Porto, Portugal
https://virtual-campus.eu/

- Developed cross-platform games for PC, Mac, Linux, Android, iOS, WebGL and Meta Quest (VR) in an Agile environment.
    - Coded gameplay mechanics and functionality of Unity games as part of larger projects co-funded by the European Union.
    - Collaborated with the art team to import, configure, and integrate assets such as 3D models, animations, textures, and materials into the Unity engine.
- Assisted with development of a game for the University of Thessaly's Creative Technologies Learning Lab, optimising performance resulting in a near 100% increase in frame rate.
- Mentored a newly hired programming intern, leading them through their first steps into game development.
- Guided a graphic design intern, introducing them to Unity's workflow and assisting with integrating visual assets into functional game scenes.

GILT - Games, Interaction and Learning Technologies   May 2017 – April 2021
Programmer / Unity Developer   Porto, Portugal
https://gilt.isep.ipp.pt/

- Developed cross-platform games for PC, Mac, Linux, Android and iOS.
    - Coded gameplay mechanics and functionality of video games developed using Unity.
- Realised proposed abstract concepts and ideas into concrete, implementable game design.
- Performed long term updates to older published projects, guaranteeing they continue to function on modern hardware and comply with Google Play Store/Apple App Store guidelines.

Skills

Professional Experience

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

Academic and/or Hobbyist Experience

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

Education

Instituto Superior de Engenharia do Porto   Master's Degree
Computer Engineering - Graphics Systems And Multimedia
https://www.isep.ipp.pt/

Instituto Politécnico do Cávado e do Ave   Bachelor's Degree
Digital Games Development Engineering
https://ipca.pt/

Languages

Portuguese (Native)

English (C2)

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 serious game designed to promote environmental education through intergenerational learning.
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.
https://ctll.e-ce.uth.gr/index.php/nature/

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
Brain training minigame compilation for Polytechnic of 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   December 2022
Cambridge Assessment English

CEFR level: C2 – Grade A (Score 225/230)

Others

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