

# Tiago Martins Andrade

VR Developer & Research Specialist



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## Profile

I'm a Virtual Reality researcher and enthusiast who is currently working at BT Innovation to bring new types of visualisations and product to the Cyber Security field. In my education, "Locomotion in Virtual Reality" was the subject of my MSc thesis which I did as an internship at Mimicry Games. I have experience developing games using Unreal Engine and familiarity with VR devices such as Oculus Rift and HTC Vive. I'm always looking for new opportunities to grow my VR specialization and build up my current skills.

## Personal Projects/Awards

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| <b>Game "aMAZEing World"</b>                      | aMAZEing World is an original VR experience designed to take advantage of the Oculus Rift tracking system to create a game without any controls besides your head movements. The game was originally made in Unity3D using C# but now is being remade in Unreal Engine using C++. The demo was showcased at Portugal Comic-Con 2016. |
| <b>2020 IEEE ISI Best Presentation Award</b>      | Recognition for an outstanding exhibition of research of "Discerning User Activity in Extended Reality Through Side-Channel Accelerometer Observations".   |
| <b>Shortlisted 2021 E&amp;T Innovation Awards</b> | My main research project, the Virtual Security Operations Centre (VSOC), got shortlisted for Innovation Award in the Cyber Security category.  |

## Employment History

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|-------------------------------|---|
| December 2017 -<br>Current    | <b>Lead VR Researcher in CyberSecurity</b>   <i>British Telecom, United Kingdom</i><br>Researching on different VR use cases for BT Cyber Security innovation to create future working tool concepts. The main focus is to create VR prototypes and evaluate the value that brings to the business, generating papers, patents and usability studies. For the prototypes I'm in charge of the different development processes (code, design, modelling and sound). Moreover, I'm responsible to showcase the inventions to investors and clients. – More information: <a href="https://vsoc.tagowill.com">https://vsoc.tagowill.com</a> |
| September 2016 –<br>July 2017 | <b>Intern (Gameplay Programmer) – "Locomotion in Virtual Reality"</b>   <i>Mimicry Games, Portugal</i><br>During the thesis research, I also helped the company in the development of a VR game using HTC Vive. This included developing the core mechanics and interactions for it. Furthermore, I started to implement multiplayer functionalities and wrap everything up in a demo. More information: <a href="https://thesis.tagowill.com">https://thesis.tagowill.com</a>  |
| March 2017 –<br>May 2017      | <b>Gameplay Programmer</b>   <i>8-bit forgers, Portugal</i><br>8-Bit Forgers is a game dev club, which provides a space to learn and experiment with game development. "Insurrection" is a 2D platformer and as a gameplay programmer I helped design the concept and developed the enemies movements/attack behaviour.   |

- September 2015 – Jun 2016 **Android Developer** | *Institute for Interdisciplinary Research of the University of Coimbra (IIUC), Portugal*  
 Creation of an Android application that gathers information from the various research centres of the University of Coimbra, as well their location with Google Maps and contacts.
- December 2013 – July 2015 **Web Developer** | *Special project of image media and communication of the University of Coimbra (PIMC), Portugal*  
 Develop and update the back-end structure and front-end UX and UI of an online cultural agenda for the City of Coimbra. The main programming languages used were Java and JS.

## Education

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- September 2014 – July 2017 **MSc in Software Engineering – 16/20** | *University of Coimbra, Portugal*  
 Core Modules: Human-Computer Interaction, Requirements Engineering, Software Architecture, Software Quality and Dependability, Ubiquitous Systems, Game Design.  
 Thesis subject: “Locomotion in Virtual Reality” – 18/20  
 Study of different methods of movement in the virtual world and analysis of the Simulation Sickness through an experimental study with a test group. Prototype using Unreal Engine, Blueprints and C++.  
 Relevant Projects: (<https://game1.tagowill.com>)  
 Development of an immersive game with Unity3D for Game Design course, inspired by the story of Agatha Christie, “And Then There Were None”. The game consisted of environment exploration, with the story being unfolded through the player’s actions.
- September 2010 – June 2015 **BSc in Informatics Engineering – 12/20** | *University of Coimbra, Portugal*  
 Core modules: Computer Graphics, Data Structures and Algorithms, Programming and Problem Solving using Java, Python and C, Distributed Systems, Data Analysis, Operative Systems, Databases, Compilers and introduction to Artificial Intelligence.

## Skills

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<b>Programming</b>	C, C++, C#, Python, Blueprints, Java, SQL, OpenGL
<b>Web</b>	AWS, Flask, HTML, REST, XML, JSON
<b>Software</b>	Visual Studio, Git, Perforce, Office, Adobe Premier
<b>Engines</b>	Unreal Engine, Unity3D
<b>VR Devices</b>	HTC Vive, Oculus Rift/Quest, GearVR
<b>QA</b>	Unit test, Integration test, System test, Black-Box and White-Box testing
<b>Languages</b>	Portuguese (native speaker), English (fluent)

## Extra Curricular Activities / Interests

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<b>Extra activities</b>	I did two cultural exchanges with young people from 6 different nationalities. I was a director and chief executive of Television of the Academic Association of Coimbra.
<b>Interests</b>	VR, FPS and Strategy games, Drama and Thriller movies.
<b>Sports</b>	Tennis and cycling.