Information Review

# Games Engine Research

## (The Best Game Engines for Beginners, June 2017)

Compares eleven game engines for both 2D and 3D games, listing pros and cons of each of them and the amount of coding that would be involved in using each one

## (About Unity 5)

Basic list of features in Unity 5

## (Game Maker Studio Features)

Basic list of features of Game Maker Studio 2

## (Unity 2D Game Creation)

List of the tutorials for making a 2D game in Unity

## (Professional Developers look at GameMaker, January 2012)

A look at GameMaker Studio (although a little outdated) by a professional, weighing up various positives and negatives of it

## (GameMaker Studio Lord Over the Pixels)

Review of GameMaker Studio, highlighting the simplicity of using it compared to Unity and other game engines

## (Unity Game Engine Review)

A review of the Unity Engine from a real-world developer, with a great list and review of individual features of the engine and recommendations for tutorials for it

# Hardware Research

## (Raspberry Pi Alternatives, April 2017)

A view into alternative single-board computers to use outside of the Raspberry Pi, including specs of the computers & various prices

## (List of 50 Raspberry Pi Components)

A nice list of components that can be attached to a raspberry pi, including various sensors and network transmitters

## (Raspberry Pi Motion Sensor using a PIR Sensor, October 2015)

Tutorial on how to set up a PIR Sensor on a Raspberry Pi using a breadboard, including software setup

## (Top used sensors for Arduino)

List of possible sensors that can be attached to an Arduino, namely the apparently most used ones

## (Using a temperature sensor on an Arduino, November 2015)

Tutorial on how to set up a temperature sensor on an Arduino using a breadboard, including code that would need to be added to get it working

## (Building love-o-meter by using temperature sensor, February 2014)

Tutorial included in the Arduino starter kit of how to setup an Arduino to read in temperature, display it on a computer and set rules to light up various LEDs based on the data collected. Handy as a simple setup for reading in temperature data

## (Building a wireless sensor network in your home, March 2014)

Tutorial of using a Raspberry Pi and several Arduinos to set up a network of sensors that all feed back to the Raspberry Pi, which can then process it and publish it to the internet

# Hardware-Game Communication Research

## (WebGL Networking)

Unity guide on using websockets or the WWW/UnityWebRequest classes to subscribe to real-time data

## (WWW Unity Docs)

Possible way to link external data in to Unity

## (Websocket Libraries Comparison, June 2014)

One person’s review of various C# implementations of websocket servers

## (Publish and Subscribe with C#, April 2002)

Tutorial of using TCPChannel objects to publish/subscribe in C languages

## (Retrieving text or binary data from an HTTP Server, June 2017)

The documentation on how to retrieve data from an HTTP server in Unity

## (Game Maker Studio 1.4 Networking Overview, August 2017)

Tutorial on the use of the networking functions of game maker studio

## (Arduino & Websockets)

Tutorial on the use of websockets and how to set up a node.js server to connect to an Arduino reading in data (and send commands to it)

## (Sending data from an Arduino to a Raspberry Pi)

Quick tutorial on how to send data from an Arduino to a Raspberry Pi via USB

# Existing Technologies Research

## (A guide to the Nintendo Game & Watch, July 2016)

A modern day look at the Game & Watch, explaining what it is, and what the various versions of it were

## (If it's not tennis elbow it may be Wii-itis, June 2007)

A doctor contracts a new condition, jokingly called "Wii-itis", a tennis-elbow like condition gained from playing a tennis simulator game on the Nintendo Wii. A good view into possible downfalls of trying to increase immersion

## (Research shows Rehabilitation Benefits of Using Nintendo Wii, September 2008)

Talking about an article that was published in the American Physical Therapy Association's journal about a 13 year old male who participated in Nintendo Wii-based training as part of this therapy for Cerebral Palsy

## (Kinect for Xbox 360 review, April 2010)

Review of the Kinect for Xbox 360, specifically praising it for the immersion with yoga/dancing games. It also touches on points such as difficulty in getting the ideal setup (and that the ideal setup is practically a requirement) and that the menu navigation is very unintuitive

## (CNET Microsoft Kinect series review, November 2010)

Another review of the Kinect, highlighting the positives of the system (That it forces you to be active and very hard to fool the system), and the negatives (menu/video navigation is "wonky" and difficult to have the right amount of room)

## (Pokémon Go Guardian Review, July 2016)

Review of Pokémon Go, describing it as "not a good game, but a great experience" showing that increasing immersion in some way, even if a poorly designed game, can make or break a user experience

## (Pokémon Go anniversary, July 2017)

An article that points out the difference in users of Pokémon Go since its release a year previous, but with a view on why it is still relevant in the world and shows that increasing immersion in a game can have long-lasting effects

# Immersion Research

## (Measuring immersion using 4D and VR, 2015)

A dissertation that has a great investigation into using VR and 4D elements to increase immersion, showing that increasing immersion has links to feeling tense/scared (as the test was done via a horror game scenario). Measures immersion via user feedback and wanted to use a heart rate monitor but was not allowed to by the ethics committee. Has similar themes to the idea of this dissertation, but rather than users interacting with real-world elements, these elements simply occur (using a brush to mimic a spider running past the player's legs and a fan when the player moves between an indoor and an outdoor environment)

## (Using VR in a third-person game to increase immersion, 2015)

A dissertation that looks into the differences in immersion in a third-person game when using VR and not using VR. Has a positive outcome on immersion, but users had the chance to get used to controls prior. Very interesting topic on how to increase immersion and on understanding how many factors come into play when discussing immersion - such as cinematography, lighting and controls too

## (Investigation into the definition and measurement of immersion, September 2008)

An investigation into ways to define and measure immersion, includes several experiments for each - such as defining immersion as a disconnect from the real-world/"becoming one with the game" and the experiment involving playing some of Half-Life and then immediately solving a real-world puzzle and seeing the difference in time. Raises various interesting points about immersion and an individual gamer's viewpoint into what their personal definition of immersion is

## (Measuring Player Immersion in the Computer Game Narrative, February 2009)

Another investigation into player immersion, in particular looking at how the story and world-building has an effect on it. Describes immersion by the term "flow", a state of total absorption or engagement in an activity

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*GameMaker Studio Lord Over the Pixels* <http://indiegamemag.com/gamemaker-studio-lord-over-the-pixels/>

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