**Final Year Project**

**Vision Statement:**

What I would like to do for my 4th year final project is to create an AR Puzzle mobile app game. I want the game to have multiply levels that the user can progress when the user have finished a level and the levels will get harder as you progress through the game.

I intend to do my main research areas in AR (augmented reality) and also game puzzle algorithms. I plan on using Unity 3D game engine and use C# to code. I intend for the game to be played on either IOS/Android mobile devices.

**AR Puzzle mobile game app:**

Augmented reality a technology that augments the real physical environment with computer-generated 3D virtual objects so that it allows the user to interact with them using the screen of their mobile devices. (Lee, et al., n.d.)(<http://ieeexplore.ieee.org/document/8005387/>) (Using Augmented Reality to Teach Kindergarten Students English Vocabulary).[[1]](#footnote-1)

(<http://whatis.techtarget.com/definition/augmented-reality-AR>).

A\* algorithm with C#.

A\* algorithm is an informed search strategy (<https://www.codeproject.com/Articles/616874/Puzzle-using-A-A-Star-Algorithm-Csharp>)

**AR SDK**

For my AR game I plan on using Unity ARKit: Remote:<https://blogs.unity3d.com/2017/08/03/introducing-the-unity-arkit-remote/>

Vulforia SDK is from Qualcomm that gave the augmented reality industry a great boost. It has one of the fastest tracking algorithms in the market. It is user friendly. Vulforia SDK is available for free, so this makes it widely used by the community. Vufornia uses C# for its script.(Cushnan & El Habbak, 2013)

Best AR SDK: <https://thinkmobiles.com/blog/best-ar-sdk-review/>

Vulforia: <https://developer.vuforia.com/downloads/sdk>

catchoom: <https://catchoom.com/documentation/augmented-reality-sdk/unity-augmented-reality-sdk-android-ios/>

Vuforia Unity Android Tutorial, Your First AR App in 20 minutes:

<https://www.youtube.com/watch?v=HnjbTytHH6U>

Getting Started with Vuforia for Unity Development:

<https://library.vuforia.com/articles/Solution/Getting-Started-with-Vuforia-for-Unity-Development>

# Bibliography

Cushnan, D. & El Habbak, H., 2013. *Developing AR Games for iOS and Android.* Birmingham: Packt Publishing Ltd.

Lee, L.-K., Chau, C.-H. & Chau, C.-H., n.d. *Using Augmented Reality to Teach Kindergarten Students English Vocabulary,* s.l.: s.n.

# References

Cushnan, D. & El Habbak, H., 2013. *Developing AR Games for iOS and Android.* Birmingham: Packt Publishing Ltd.

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1. [↑](#footnote-ref-1)