

# Matthew (Quinn)Cooper

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GitHub repository URL: <https://github.com/redraven7299/RMITwork>

GitHub pages URL:

## Tech savvy from a youthful age

A technology enthusiast from a youthful age having grown up with it always around me, I have always had a keen interest in various aspects on technology can be utilised. From building out applications and games, to tinkering with internet of things (IOT) projects. For me I have always been driven to the challenge of first understanding the goal, learning new aspects to a technology, then adapting it to the task at hand. I have a passion for building out useful technology projects that help make a difference in the world, love learning new things and then sharing that where I can. I love gaming and seeing how each element of the code works with each other, seeing if it is possible to find a glitch, bug or exploit and contacting the developers about it so they can try and fix it. Helping the community grow and be more inclusive to everyone. The person that got me interested in IT (Information Technology) would be my father known as developersteve (also legal middle name) who taught me some of the skills I use today.

## Why I chose RMIT

I chose the prestigious RMIT (Royal Melbourne Institute of Technology) because it is known as an amazing technology university and its reputation of being one of the best universities in Australia. It is ranking 59<sup>th</sup> globally, RMIT offers exactly what I am looking for, an extensive and excellent online classes, great student help and tutoring, plus all the people that have graduated RMIT E.G. Leigh Bowery, Toni Matičevski, Andrew Stockdale, Albert Ernest Kitson, Lydia Lassila, Gillian Chung, James Wan, and many more. It has been a great confidence boost to know that a prestigious university like RMIT has accepted me and is giving me a chance to show my worth and allow me to grow and evolve my skills. To quote, "There is no secret to success. It is the result of preparation, challenging work, and learning from failure" -General Colin Powell.

## What I expect to learn?

I expect to learn about basic IT (Information Technology) skills like Cyber security, data analysis, cloud computing, machine learning, fundamental programming (JavaScript, python, CSS (Cascading Style Sheets), swift), system and networks, ETC. I also hope to learn about website building, how to work well within a development team, how to use GitHub repository, GitHub pages, managing infrastructure, writing, and managing a scalable codebase and application delivery. I do primarily hope to work and build upon the skills I have already learnt and learn new skills that can be useful in the near future and the far future. I want to learn how to create and evolve my ideas and expand my interests in IT (Information Technology). I also want to help others with their skills and help them grow, so then we can all grow and help each other so the technology industry can grow and evolve. "Every skill you acquire doubles your odds of success."  
Scott Adams.

## Ideal job



### **3C's Gameplay Programmer**

Ubisoft · Sydney, New South Wales, Australia

The Ubisoft 3C's Gameplay Programmer job entails:

The job will need to work closely with Games Designers to take part in the development of player-based gameplay systems. The job may involve work related to the game controls, character movement, weapons and combat, cameras, or the animation engine.

- Define and develop prototypes in collaboration with the Design team.
- Participate in the architecture, design, and implementation of the gameplay code following the Game Design intentions.
- Work within the constraints of the existing game engine to meet performance and quality benchmarks.
- Look for innovative tools and techniques allowing to achieve the best gameplay quality possible.
- Interface with all disciplines, game designers, animators, programmers, ETC. to ensure that the constraints are well integrated in the game development.

The job is appealing to me because I absolutely love the games Ubisoft produce and would love to work within the company. Ubisoft has amazing diversity and promotes personality and creativity.

## Job qualifications

The qualifications of the Ubisoft 3C's Gameplay Programmer job must include:

- Good understanding and command of C++ programming, including refactoring, optimization, debugging and testing
- Control and understanding of 3D (3 Dimensional) mathematics and their use in gameplay systems
- Understanding and experience with real time animation techniques
- Attention to detail and an eye for quality
- An interest in game design, and a strong understanding of what makes responsive and intuitive game mechanics
- Ability to work autonomously and self-organize
- Excellent communication skills and ability and desire to work as a team player

What experiences are needed for the Ubisoft 3C's Gameplay Programmer job is experience working on first or third person games is ideal but not needed for this Ubisoft job application.

## skills, qualifications and experience I currently have

Current Skills: programming (JavaScript, phaser.js, scratch, html5), a fundamental understanding of game design, understanding of game mechanics (how game elements work, key bindings, character movement), A fundamental approach to game development.

## Plan to get the skills, qualifications, experiences to get job

To get the skills, qualifications and experience needed for the Ubisoft 3C's Gameplay Programmer role. I will continue to go to RMIT with the aim to obtain a bachelor's degree in programming and IT. In conjunction with furthering my studies, I will look to gain industry experience by building out my own projects and ideas. I hope to also obtain more experience by securing part time work as a junior game developer and/or junior developer. The aim is to get into an established company and continue to hone my skills to be promoted by proving my capabilities as a developer. My (current) ultimate goal is to secure a position in Ubisoft as a 3C's Gameplay Programmer. It is going to take a while but will be worth it, though goals change so it may not be my ultimate goal job forever and that is perfectly fine.

## Personal Profile

## Myers-Briggs test

### Assertive Logistician

#### ISTJ-A

Logisticians take pride on their integrity. When people with this personality type say something, we mean it. we commit to doing something, they always follow through. Logisticians make up most of the population, famous Logisticians include Sting (Gordon Matthew Thomas Sumner), Danzel Washington, Angela Merkel, Natalie Portman, Anthony Hopkins, George Washington, Condoleezza Rice, George Herbert Walker Bush, ETC. The strengths of a Logisticians: Honest and Direct, Strong-willed, Dutiful, Very Responsible, Calm and Practical, Calm and Practical, Create and Enforce Order, Jack-of-all-trades. The weaknesses of a Logistician: Stubborn, Insensitive, always by the Book, Judgmental, Often Unreasonably Blames Themselves. Jobs that most Logisticians get are accountants, auditors, data analysts, financial managers, business administrators.

## Learning Styles Test

### Pragmatist Style

Pragmatists need to be able to see how to put the learning into practice in the real world. we are hands on. Abstract concepts and games are of limited use unless we can see a way to put the ideas into action.

Pragmatists are likely to be experimenters, trying out new ideas, theories, and techniques to see if they work. we may act quickly and confidently on ideas, getting straight to the point, and may lose patience with lengthy discussions. Learning methods especially suited to pragmatists includes Practicals, Case studies, Problem setting, Discussions.

## Big Five Personality test

Extroverted – 13 people who score high on Extroverted are outgoing and social. Individuals who score low tend to be shut ins.

Emotional Stability – 74

Agreeableness - 21 Agreeableness is a person high in agreeableness is friendly and optimistic. Low scorers are critical and aggressive.

Conscientiousness - 31 Individuals who score high on this factor are careful and diligent. Low scorers are impulsive and disorganized.

Intellect/Imagination - 14 People who score low tend to be traditional and conventional.

## What do the test results mean to me

The test results to me mean that I am more logical than emotional, I have a high amount of pride and I keep my word. I work best alone, and I work best hands on, and I experiment with a lot of different solutions to find the perfect solution for the task at hand. I do not like talking about what to do for too long and would rather just do it, lengthy discussions make me lose patience quite quickly. My weaknesses are annoying, but it is manageable. The Big Five Personality Intellect/Imagination description does not match up with who I am, but the score does, I expected that the tests would not be exact because people are complex, with multiple layers of emotions, understanding is not that simple that you could guess someone within a few questions.

## How do these results influence my behaviour in a team?

These test results influence my behaviour in a team because I would rather work alone than in a team, I work better alone than in a team, if I am forced to work with others then I am going to take the job with the least amount of talking and/or working with others and do it until we either have to hand it in, there is some sort of drama and I have to get involved to get everyone back on track (highly unlikely) or I finish what I am doing and have to help another person with their particular part of the assignment. If/when we have to discuss the assignment, I am going to put in what I think we should do/say/make and buckle down on it, I will be stubborn until everyone picks one then I will switch.

## How should I take this into account when forming a team

How I should take this into account when I am forming a team is I should try to get people who are like my working style, others who would go off and do their own thing while we have one person with the easiest part of the assignment but make communication happen with the other members of the group. Also try to get people who know exactly what they have to do and one person who is creative, to think up ideas and the design of what we

are doing so that we do not spend a significant amount of time just trying to figure out how it is going to look. Also, will need someone to do the speaking part of the assignment (if there is a part like that.) and someone who is good at all the parts of the assignment so they can finish quickly and see if anyone needs help with their part of the assignment.

## Project Idea

### Project Summary

My Project idea is a game where you play through the different eras of gaming, starting in 1958 and moving to 1960s, 1970s, 1980s and 1990s. You will play one round/level/game then move onto the next, after completing the 1990s game you will fully start the plot of the game. An antagonist is stealing and/or destroying the earlier games because of (TBD). It is your job to defeat the antagonist and save all of gaming, because without the old game ever existing the newer and future game will not have any inspiration and game mechanics made by the old games to use, so they disappear.

### Motivation

My motivation behind the game is that I have never seen or heard of a game like this one before, and people need to understand and respect the retro and classic games that help shape the gaming industry and community to what it is today, I've always have had a passion and love for retro games ever since I was young, even now some of my favourite games are old games (Kirby's Adventure, Mario the Lost Levels, Tetris, ETC). The old games did not have much to work with when they were being built, because it was still very new there was not much when it came to coding, game mechanics and visual design. They made so many game mechanics that are still in use today, the first ever boss in videogames was made in 1975 in a role-playing game called DND on the PLATO system.

### Description

The game is about traveling through the years of gaming, start in 1958 playing Pong (first game made), after beating the game (scoring 5 points) you move onto the 60s, playing Spacewar! (Win by defeating opponent) On the PDP-1 (Programmed Data Processor 1), 70s Galaxian (win by destroying

all the invading aliens), 80s Tetris (get to a score of 10,000) and 90s sonic the hedgehog (complete first level). I will change the games just enough that copyright does not take the game down (changing the characters and enemies so you can still tell what it is meant to be). Throughout the games little glitches will happen (visual glitches, sprites not rendering properly). Then once you beat the sonic the hedgehog level a portal will open, and the level will start to turn into code (matrix like code) and sonic will turn into the players actual form (the cursor on Windows/Mac/Linux) and walk through the portal, starting the main plot of the game, the antagonist (TBD) is destroying the old games one by one and the game developers are banding together to take the antagonist down and restore the games with the help of the master code, a line of the first ever written code (`cout << "Hello World"`), (it is that line of code because it's the first thing you write in C++). You go and confront the antagonist with all the developers, there is a cut scene of talking with the antagonist about what they are doing is wrong and that we are here to stop them. The antagonist seems to have a change of heart and comes to have a peaceful talk, but it is a ploy to get the master code and wipe all the developers and the protagonist out of existence, but the protagonist does not die, and the antagonist is stunned and retreats, fearing what the protagonist is. The protagonist wakes up in a creator where the game developers got wiped out of existence and has a moment of confusion and sadness, before getting angry and wanting vengeance for the fallen comrades. The protagonist goes back to the base the game developers had and gets ready for a fight with the antagonist, knowing that the antagonist has the master code and can use it to wipe the game out one by one. The protagonist sees a map leading to 4 artifacts (python-poison breath attack, HTML5-magic book with the different tags as magic spells, JavaScript- a roll dodge, java- a upgrade to the JavaScript roll dodge that make it a phase dodge that can go through enemies), weaker than the master code but each do different abilities, so the protagonist goes and search for the artifacts and collects them, when coming back can try the new abilities on the enemies (antagonists army they created). Once all the artifacts have been collected the protagonist goes to the castle the antagonist has created to defeat the antagonist, going through the castle the antagonist has 4 generals (TBD) and the protagonist has the defeat the 4 generals to make it to the throne room of the castle where the antagonist is waiting and destroying games. When the protagonist walks into the throne room the antagonist is destroying a green dinosaur with a shell on its back (Yoshi from Yoshi's island) and says for the protagonist to wait while I take care of this thing (referring to Yoshi). The protagonist gets angry and rushes the antagonist, the antagonist hits the protagonist away and says" fine, you want to fight so badly? Then let us fight!." The boss battle happens. After the boss battle and the antagonist loses, the protagonist picks up the master code to try and bring back the game developers, but cannot, because the protagonist is a player and cannot edit the code without a terminal. So, the player (protagonist) gets sad and angry and throws the master code, hitting a trapdoor under some rubble. The protagonist goes and searches the rumble for the trap door and opens it, going inside the trapdoor the protagonist sees a basement with

an old Macintosh SE/30 with a singular white blinking line in the top left corner of the screen. The player also sees a coffee machine and a fold-out bed. The player makes a cup of coffee and sits down at the table with the Macintosh SE/30 and says "let us get started fixing things" and you can hear typing happening as the player starts to remake all the deleted games, starting with pong. A pong paddle gets created in the room by blue code and it flies out the trapdoor. The credits roll.

## Tool and Technologies

The software needed to make the game is called flutter, it is used to make apps and games for most devices, including but not limited to android phones, iPhone, Xhaomi phones, Linux, macOS and Windows. Hardware would be most devices since it is pixel 2d and is not 3d, which means it does not need as much graphics as those 3d games. It also has the potential to run on older consoles like the GBA (Game Boy Advanced), PlayStation 1, PlayStation 2, ETC. Anything that can run 32-bits can run the game. I will also make any sprites, sprite sheets, images and backgrounds needed using an online pixel art maker.

## Skills Required

The skills required would be knowing one of three programming languages, C, C++, and Dart. Also, an understanding of game programming fundamentals and visual design fundamentals, knowledge of how to use flutter. It would not be hard to obtain these skills, it would take some time to learn the programming languages enough to use them. Can do online courses to learn C, C++, and Dart. The visual design part of the project would be a bit difficult with the length creating the Sprites, Sprite Sheets, Images and Backgrounds. And the programming part of the project will take the most time, with the making of Mutiple game mechanics, I may be able to reuse some of the lines of code form the individual game parts such as the jumping from the sonic the hedgehog part into the main game, the collision part of galxian can be used to kill enemies in the main part of the game, ETC.

## Outcome

What I hope the outcome will be for this game is that It is a hit and gets a lot of fans, then make a second game where the protagonist from the first game is the antagonist from the second game, becoming mad with power and changing the games to suit their needs and change the timeline, so the protagonist from the second game has to go and collect the same 4 artifacts from the first game and some new ones to try and defeat him, but



fails to do so then something happens to the antagonist, (don't want to reveal all the story before the game is even made).