# APPENDIX C

RESEARCH LOG

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#### INTRODUCTION

This document outlines the importance of reading literature and understanding different approaches in great detail.

#### WHY I SFI FCTFD THESE PAPERS

I selected these papers as they cover all aspects of the research I wanted to explore. From one standpoint I looked at lots of different wireless communication and wireless network papers to understand how detection occurs using correlation and how it could be improved. I also then looked at things from a deep learning perspective and this gave me a great foundation in what architectures I wanted to use, and I thoroughly understood them before impending.

Selecting such papers and reading about deep learning and its applications to everyday use, I became more and more in line with how things worked.

#### **HOW I USED THIS LITERATURE**

I used Mendely throughout the course of this project to store and track all of the research papers I have read. I used this literature to my gain, as I was able to understand thoroughly new and different aspects I wasn't exposed to before. Each new paper brought something new to the project and how I could adapt it to ensure the project became more of a success.

#### COMPARISON OF IMPLEMENTATIONS

As the approach of comparing deep learning to detection algorithms isn't widely researched yet, I built upon other ideas including traditional methods and from there was able to formulate a plan on how to first generate my datasets but then also see an improved performance.

Essentially, the main element of this paper and why it has been successful is the use of neural networks with memory which is explained throughout the project aids in the detection of packets using the preamble sequence.

#### THE VALUE OF CONTINUED READING OF LITERATURE

I love to read, and find reading the only way to thoroughly understand something. I take great pleasure in reading something and implementing it into everyday life. In this project the initial literature review was the propeller to kickstart the project as, thankfully I read and put a lot of research into different topics which paid significant dividends in the end.

### IMPACTS CONTINUED READING HAD ON THE PROJECT

The value of the literature review, and the reading that came after it were invaluable and without taking the time to do the literature review I would not have been able to finish this project to any decent standard.

However, as I continue this project continued reading will become more and more influential and determine the outcome of the entire project. Applying the means of what you learn to everyday life I feel makes you a better person. As the saying goes, "the day you stop learning is the day you die"