# 2. Literature Review

## 2.1. Introduction

In this chapter …

## 2.2. Research Topic 1

## 2.3. Research Topic 2

## 2.4. Existing Final Year Projects

**Project 1**

**Title:** Proactive Order Management System

**Student:** Stephen Fox

**Description (brief):**

An application that allowed businesses to handle orders processes by analysing its data within the system. This system also provides businesses with information on how and when to process these orders. The order processes are placed into the system remotely through customers using a mobile application that can access and connect to the host web system.

**What was complex about this project?**

The task Scheduler manager was the most complex part of the system as many uncertain fields that could change that this system needed to calculate in order to be optimised for the overall system.

**What technical architecture was used?**

A Client – Server application with the tech tools iOS Application, Web Application and AngularJS acting as the client-side while Node.js, NuPIC, Proactive Module - Flask, Google Map Distance Matrix API and MongoDB as the server side

**Explain the key strengths and weakness as you see it**

To have an algorithm that dynamically creates task handlers based off the tasks requirements is a strength as it allows you to expand your resources and minimise data wastage at the same time.

The data involved does not seem to be protected through encryption or other methods, which could allow nearby people who could steal the data to view the data, is a major weakness of the application.

**Project 2**

**Title:** Glucose Coach

**Student:** Alex Kiernan

**Description (brief):**

An application designed to track people whom have type 1 diabetes to better manage their overall health by logging their blood sugar levels, their diet and their physical exertion into the coaching system. Once logged, the application will be able to provide the necessary suggestions catered to the individual user to enable them to better manage their glucose levels.

**What is complex about this project?**

The machine learning part of the overall system was the main complexity as research was needed to be conducted combined with the development of the sound process in order to properly process the user information into the system and export back accurate results to the user.

**What technical Architecture was used?**

A Client – Server architecture was used with the RESTful service links between the two, a remote relational database, a flask server and the machine learning system scikit-learn as server side while the use of a mobile application as the client.

**Explain the key strengths and weaknesses as you see it**

A key strength of the application was at the time of development, the constant monitoring of the users progress with the insulin intake was unique to the system design which provides it a competitive edge compared with similar applications

A weakness of the application would be the lack of knowledge provided back to the users whom used this application. If there were graphs that displayed over time the use of insulin intake over days and weeks, it would have made the user understand their blood sugars levels more in depth, which would have allowed them to make more informed decisions.

## 2.5. Conclusions