# Version Guide

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Creating an End to End Business Solution Using the R and Shiny Packages

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**ABSTRACT**

The childcare industry in Singapore is a niche market that requires constant tailoring to fit the needs of the parents, schools and most importantly the children.

This project seeks to help ease the management of data and information for the company through the R and Shiny packages.

The Shiny package is useful to create interactive web apps from R

Some of the problems that company faces are the mismatch of staff available which results in mismatch in staff to program ratio.

The company wishes to keep track of the client database and the various corresponding information to identify useful insights.

To solve this problem, we have conducted a research to justify how market basket analysis is able to show a shift in customer preferences and profiles resulting in an actionable recommendation after understanding these insights.

Data visualization will also be used because it enables the business user to understand changes in customer behaviour and helps the user to discover insights across their different customer profiles.

Our team also seeks to find out whether time series analysis is able to help find insights because it enables the user to determine whether and how activities and choices are changing over time.

A forecasting tool will be built to help predict the number of resources needed for the company to be able to plan and manoeuvre around possible problems ahead of time instead of reacting to a problem.

Based on our results, we aim to create an analytics dashboard which will provide a forecasting tool that stores and process information for our sponsor to better manage the operations and planning for the company.