SDV602 Project

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# Introduction:

This report will serve as documentation for my data analysis SDV602 project as well as provide insight into the issues encountered and the process of decision making for this application. This specific application will be focused on comparing IT jobs between NZ and Australia, Taking into account Region, Job title, Job description, Salary and Date.

This application will utilize a GUI development library known as PySimpleGui to develop the foundation of the user interface and will use Matplotlib to present the data in a variety of formats.

# Requirements:

The overall goal of this project is to create an application that allows multiple people to view and discuss a data set as well as view several different graphs and interpretations of said dataset. To achieve this the following will need to be implemented:

* Multiple Data viewing screens
* Ability for user to signup and login
* A chat for each screen
* Data formatting functions
  + Comparing Number of jobs over time
  + Comparing Quantity of jobs per population
  + Comparing Job roles
  + Comparing Job salary

# Screen Design:

This application will require a number of differing screens to be determined as successful against our requirements, these screens will consist of;

* A login screen: This will accept the users username and password and if successful will take them to the application, if the password is incorrect they will be prompted to try again, if the username does not exist the user will be prompted to create an account.
* Registration: If the user does not have an account they will be able to create one through the registration screen. This will contain a small form for the user to fill out.
* Main Screen: This will be the main hub for the users to choose which data set and graphs they wish to view. This will be a basic screen welcoming the users and be simple to navigate.
* View Screens: There will be several view screens offering different graphs and insights pulled from the original dataset. These screens will provide the user the functionality to chat to each other as well as select datapoints for closer inspection.

# Application Description:

This application aims to provide the user(s) with a multiuser application where multiple users can view, manipulate and discuss our selected datasets. As we progress through this project we will develop a simple backend database to store and check login data so that our multiple users can be identified while using the application.

This application will be used to provide insights into the IT job market both in New Zealand and abroad in Australia. I chose this dataset as I believe it will provide valuable insight, especially to those of us just entering the tech industry.

# Story Boards:

Login:

Graphical user interface, application

Description automatically generated

This application will utilize a standard login screen to request Username and Password information for us to match against our database.

Register:

Graphical user interface, application

Description automatically generated

Our register screen will consist of a basic form that prompts our users to input and confirm some basic details for their account.

Incorrect Password:

Shape

Description automatically generated with medium confidence

A standard popup will be used to notify users of incorrect password attempts. Ideally this warning will disappear automatically after a set time.

Home Page:

Graphical user interface

Description automatically generated

The home page of our application will consist of a basic intro screen that provides a simple table of the view pages, an exit button, a view of the unmanipulated dataset as well as an initial chat to communicate which data view you wish to go to and so on.

Views:

Graphical user interface

Description automatically generated

The view pages will consist of a title and intro to the dataset (Providing the user with some information to help them discern what this view provides), The data view in whichever graph we wish to use as well as the simple chat function to discuss the view.

Graphical user interface

Description automatically generated with low confidence

Graphical user interface

Description automatically generated