# CS 340 README Project 2 – April Rose

## About the Project/Project Title

*The AAC Dashboard project aims to create an interactive web-based dashboard for analyzing animal data from an animal shelter. This project utilizes Python, MongoDB, and the Dash framework to provide users with a user-friendly interface for exploring and visualizing animal data.*

## Motivation

*The motivation behind the AAC Dashboard project is to provide Grazioso Salvare with a powerful tool for analyzing and visualizing their animal data. This dashboard will allow them to make informed decisions about animal rescue and adoption strategies based on data-driven insights.*

## Getting Started

***Set up MongoDB Database:***

* *Import the provided CSV data into MongoDB.*

***User Authentication:***

* *Authenticate using the credentials:*
  + ***Username:*** *accuser*
  + ***Password:*** *(refer to the .env file for the actual password)*

***Prepare CRUD Operations:***

* *Create a Python script for all CRUD (Create, Read, Update, Delete) operations.*

## Installation

*The following tools are required to use the AAC Dashboard:*

*Python*

*MongoDB*

*To install the required Python packages*

*Dash*

*Plotly*

*Pandas*

*JSON*

## Usage

*The AAC Dashboard provides the following functionality:*

* *Interactive data filtering using dropdown menus*
* *Display of data in a dynamic DataTable*
* *Visualization of data using Pie Charts*
* *Geolocation mapping of selected animal records*

### Code Example

*# Import necessary libraries*

*import dash*

*import dash\_core\_components as dcc*

*import dash\_html\_components as html*

*# Create Dash app*

*app = dash.Dash(\_\_name\_\_)*

*# Define app layout*

*app.layout = html.Div([*

*dcc.Dropdown(*

*id='my-dropdown',*

*options=[*

*{'label': 'Option 1', 'value': 'option1'},*

*{'label': 'Option 2', 'value': 'option2'}*

*],*

*value='option1'*

*),*

*html.Div(id='output')*

*])*

*# Define callback function*

*@app.callback(*

*dash.dependencies.Output('output', 'children'),*

*[dash.dependencies.Input('my-dropdown', 'value')]*

*)*

*def update\_output(value):*

*return f'You have selected: {value}'*

*app.run\_server()*

### Tests

*Ensure that the map updates correctly by selecting different rows in the DataTable. The update\_map function prints the index and row to verify that the map view changes accordingly.*

print('row: ' + str(row))

### Screenshots

A computer screen shot of a computer screen

Description automatically generated

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