# CS 340 README Template

*Use this template to complete your README file. When completing the template, keep the headings as they are so that your document has a clear organization. Remove the italicized prompt text after you have completed each section for a polished final document.*

## About the Project/Project Title

*Provide a little information about your project or an overview that explains* ***what*** *the project is about.*

It is an interactive dashboard for a company called Grazioso Salvare. The company trains rescued animals. This dashboard displays information such as location of the animals and helps identify dogs suitable for Water Rescue, Mountain Rescue, and Disaster/Tracking services. You can filter and look at a pie chart statistics.

## Motivation

*This is a short description of the motivation behind the creation and maintenance of the project. This should explain* ***why*** *the project exists.*

The company needed an easy to use dashboard that was easy to navigate and filter through. And streamline analysis, and provide interactive access to critical animal characteristics like breed, age, and sex.

## Getting Started

*This is an example of how you may give instructions on setting up your project locally: “To get a local copy up and running, follow these simple example steps.”*

* Upload your files to apporto
* Make sure MongoDB is running in Apporto or locally and populated with the Austin Animal Center dataset.
* Open the jupyter file to launch it
* Run the application and use filters

## Installation

*List the tools you need to use the software and how to install them.*

To use and test this project, you'll need:

* + Python 3.x
  + pymongo library
  + Jupyter Notebook
  + MongoDB (running in Apporto or locally)
* Required Python libraries:
  + pymongo
  + pandas
  + dash
  + dash\_table
  + dash\_leaflet
  + plotly
  + jupyter\_dash
  + base64 (for logo/image support)

## Usage

*Use this space to show useful examples of how your project works and how it can be used. Be sure to include examples of your code, tests, and screenshots.*

### Code Example

*Show what the library does as concisely as possible. Developers should be able to figure out how your project solves their problem by looking at the code example. Make sure that your code is short and concise.*

@app.callback(Output('datatable-id', 'data'),

[Input('filter-type', 'value')])

def update\_dashboard(filter\_type):

if filter\_type == 'water':

query = { "breed": { "$in": ["Labrador Retriever Mix", "Newfoundland"] }, ... }

elif filter\_type == 'mountain':

query = { "breed": { "$in": ["German Shepherd", "Rottweiler"] }, ... }

...

filtered\_df = pd.DataFrame.from\_records(db.read(query))

return filtered\_df.to\_dict('records')

This code is to filter things such as water and animal type.

### Tests

*Describe and show how to run the tests with code examples.*

Mong*oDB* was used tostore animal outcomes file and works perfectly with python. JupyterDash was used to enable running Dash apps within Jupyter Notebooks. Dash Leafletwas used for map visualizations and geolocation. Used a pie chart as an interactive diagram.

* **Explain the steps that were taken to complete the project.**

Steps that were taken was that I connected to MongoDB and tested CRUD operations. Then I built a dash app to display data. Then I designed the dashboard layout with DASH. Added a pie chart and map using callbacks. I added the logo for the company to the top left of the screen. I wrote code to help with filtering and column highlighting.

* **Identify any challenges that were encountered and explain how those challenges were overcome.**

The challenges I had was actually with apporto it would say it is running and wouldn’t launch firefox. I had to clear my cache and run the page again after a few times of refreshing. The image wouldn’t load so I had to add a file path that would work and used base64 encoding.

### Screenshots

*Provide screenshots that demonstrate your work.*

*A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.*

## Contact

Your name: Johnathan Dumke