# 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

*The project contains CRUD commands for MongoDB using pymongo and Python, as well as a dashboard that displays several queries, a map, and a pie chart.*

## Motivation

*This project exists to demonstrate how CRUD (Create, Read, Update, Delete) commands can effectively placed into projects via the use of software like pymongo. Additionally, the project portrays creation of python modules for portable code.*

*This project also shows usage of Dash in order to create a user interface and web application. Doing so allows for easier user experience and usability.*

## Getting Started

*In order to get this software running, the source code can be downloaded from GitHub. Other software that must be downloaded includes Python 3.x or later, pymongo, and the latest version of MongoDB. The MongoDB instance must be running before running code contained in this module.*

## Installation

*MongoDB*

*Pymongo*

*Python 3.x or later*

*Any Python IDE (shown is Jupyter)*

*Pandas*

*Dash*

*Plotly*

## Usage

*Usage of code consists of simple database commands including creating and reading data from a MongoDB database. These commands can then be used as the backend portion of a Dash dashboard with elements from Plotly integrated. This dashboard can be interacted with directly as a user without need for terminal commands.*

### Code Example

*![Graphical user interface, text, application

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### Graphical user interface, text, application Description automatically generatedGraphical user interface, text, application Description automatically generated

Graphical user interface, text, application

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### Tests

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

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Test shows an entry being created and then a search being performed for that created document.

Graphical user interface, text

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Expanded test script that shows how all four crud commands can be used in tandem to manipulate documents.

### Screenshots

Graphical user interface, text, application

Description automatically generatedGraphical user interface, application, map

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Description automatically generatedGraphical user interface, application

Description automatically generatedGraphical user interface, text, application, email

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## Roadmap/Features (Optional)

*Features to be added in potential future updates include fixes to the query buttons. After several clicks the buttons become unresponsive. I am unsure at present how to solve this issue.*

## Contact

Your name: Samantha Godwin