Artifact Three - Full Detailed Instructions

**Requirements**

1. MongoDB 7.0.14
2. MongoDB Shell 2.3.8
3. MongoDB Compass (GUI) Stable version
4. Python 3.12.6
5. Dependencies (Install using pip)
   1. pymongo (Python driver)
   2. dash
   3. dash\_bootstrap\_components
   4. dash\_leaflet
   5. numpy
   6. pandas
   7. matplotlib
6. Jupyter Notebook
7. Windows 64-bit Operating System

**Installation Instructions**

**MongoDB:** (To install MongoDB on Windows, you will first need to download the MongoDB server and then install the MongoDB Shell.)

Install from MSI file

1. Go to the [MongoDB Download Center](https://www.mongodb.com/download-center/community) to download the MongoDB Community Server.
2. From the dropdown options, select 7.0.14, Windows x64, and msi
3. Click Download
4. Double-click the installer file
5. Click Next
6. Accept the End-User License Agreement and click Next
7. Select Complete and click Next
8. Make sure “Install MongoD as a Service” is checked
9. Select the “Run service as Network Service user” option and click Next
10. Click Install
11. Once the installation is complete, click the Finish
12. Now go to the location where MongoDB is installed in your system and copy the bin path. The MongoDB installation can be found in the Program Files located in the C: drive.
13. Add the location/path of the MongoDB installation to your PATH environment variable. (Instructions can be found below; under the “Steps to add a binary PATH environment variable” section of this document)

**MongoDB Shell:**

Install from MSI file

1. Open the [MongoDB Shell download page](https://www.mongodb.com/try/download/shell)
2. From the dropdown options, select 2.3.8, Windows 64-bit (10+), and msi
3. Click Download
4. Double-click the installer file
5. Ensure that the MongoDB Shell binary is in the desired location in your filesystem, then add that location to your PATH environment variable (Instructions can be found below;
6. under the “Steps to add a binary PATH environment variable” section of this document)

**Steps to add a binary PATH environment variable:**

1. Open the Control Panel.
2. In the System and Security category, click System.
3. Click Advanced system settings. The System Properties modal displays.
4. Click Environment Variables.
5. In the System variables section, select Path and click Edit. The Edit environment variable modal displays.
6. Click New and add the file path to your Mongosh binary.
7. Click OK to confirm your changes. On each other modal, click OK to confirm your changes.

* Tip: To confirm that your PATH environment variable is correctly configured to find mongosh, open a command prompt and enter the mongosh --help command. If your PATH is configured correctly, a list of valid commands displays.

**MongoDB Compass (GUI):**

Install from EXE file

1. Open the [MongoDB Compass (GUI) Download page](https://www.mongodb.com/try/download/compass)
2. Download the stable Windows 64-bit version
3. Double-click the downloaded .exe file
4. Follow the on-screen instructions

**Python:**

Install from EXE file

1. Open the [Python download page](https://www.python.org/downloads/release/python-3126/)
2. Download the Windows installer (64-bit) for Python 3.12.6
3. Double-click the downloaded .exe file
4. Follow the on-screen instructions.
5. Check the box to "Add Python 3.12 to PATH." This makes it easier to use Python from the command line.
6. Verify Installation

* Open a terminal or command prompt.
* Type “python3.12 --version” and press Enter.
* If the installation is successful, it will display: Python 3.12.6

**Dependencies**

**pymongo:**

Install using pip

1. Open your terminal or command prompt
2. Type *pip install pymongo* and press Enter

**dash**

Install using pip

1. Open the command prompt
2. Type *pip install dash* and press Enter

**dash\_bootstrap\_components:**

Install using pip

1. Open the command prompt
2. Type *pip install dash\_bootstrap\_components* and press Enter

**dash\_leaflet**

Install using pip

1. Open the command prompt
2. Type *pip install dash\_leaflet* and press Enter

**numpy**

Install using pip

1. Open the command prompt
2. Type *pip install numpy* and press Enter

**pandas**

Install using pip

1. Open command prompt
2. Type *pip install pandas*

**matplotlib**

Install using pip

1. Open command prompt
2. Type *pip install matplotlib*

**Jupyter Notebook:**

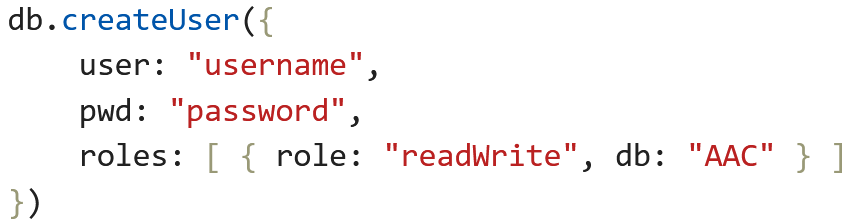
If you haven't already: Follow the instructions to install Python 3.12.6. This includes installing pip, the package installer for Python.

Install Jupyter Notebook using pip

1. Open your terminal or command prompt
2. To install Jupyter Notebook, type “pip install notebook” and press Enter
3. To run Jupyter Notebook, type “python -m notebook” in the command line to run Jupyter Notebook. This will open Jupyter Notebook in your default web browser.

**Instructions To Run Artifact**

1. Create the database using MongoDB Compass and csv file
   1. Open MongoDB Compass and click on localhost:27017
   2. Click Create Database
      1. type “AAC” for the database name
      2. type “animals” for the collection name
      3. Click Create Database
      4. You should now see the AAC database successfully created
      5. Click “Import Data” and select the aac\_shelter\_outcomes.csv file
      6. Click Import
      7. The AAC database now contains data that will be used in the Python CRUD module
2. Create an admin user with read-write roles for the AAC database using MongoDB Shell
   1. Open the command prompt and type “mongosh” to use the MongoDB Shell
   2. type “use admin” to switch to the admin database
   3. Using the admin database, you will create an admin user by following the code below. You are free to choose your own username and password. It will be used in the *Artifact Three - Austin Animal Center Dashboard.ipynb* file later.



* 1. Verify the user has been created by typing db.getUser(“username”)
     1. “username” will be the username you chose

1. Run the MongoDB server
   1. Open a separate terminal or command prompt
   2. type mongod
      1. If there are no errors the Mongo server is running successfully
2. Run Jupyter Notebook
   1. Open a separate terminal or command prompt
   2. type python -m notebook
   3. Jupyter Notebook will open in your default browser
   4. Using Jupyter Notebook, locate the folder that contains the artifact files
   5. Open the Artifact Three - Python Testing Script.ipynb file
   6. Verify that the *username* variable matches the username you chose for the admin user. If not change it so that it matches.
   7. Verify that the *password* variable matches the password you chose for the admin user. If not change it so that it matches
   8. Click on the play button to run the Dashboard