How to Open a Free MongoDB Atlas Account, Load Sample Data, and Connect from a Python Notebook

MongoDB Atlas is a cloud-based, fully managed NoSQL database service. This guide will walk you through the steps to create a free account, load sample data like the `sample\_mflix` database, and connect to your MongoDB instance using a Python notebook.

# Step 1: Creating a Free MongoDB Atlas Account

1. Go to the MongoDB Atlas website: https://www.mongodb.com/cloud/atlas.

2. Click on 'Try Free' and sign up using your email or a Google account.

3. Once you’ve registered, follow the prompts to create your first free cluster. You can choose the Free Tier option (shared cluster) which provides up to 512 MB of storage.

4. Choose a region where you want your database hosted. You can select the region closest to you for optimal performance.

# Step 2: Creating a Cluster and Loading Sample Data

1. Once your MongoDB Atlas account is set up, you’ll be taken to the Atlas dashboard.

2. Click on 'Build a Cluster' and select the free tier (M0 cluster).

3. In the 'Cluster' settings, give your cluster a name and create it.

4. After your cluster is created, click on the '...' next to your cluster and choose 'Load Sample Data'.

5. MongoDB Atlas will take a few minutes to load the sample databases, which include `sample\_mflix` (movies dataset), `sample\_airbnb`, and others.

# Step 3: Whitelisting IP Address and Creating a Database User

1. To connect to your MongoDB Atlas cluster from anywhere, you'll need to whitelist your IP address.

2. In the Security section, click on 'Network Access' and add '0.0.0.0/0' to allow access from any IP (not recommended for production).

3. Next, go to the 'Database Access' tab and click on 'Add New Database User'.

4. Create a new user by setting a username and password. Ensure the role is set to 'Atlas Admin' or similar for full access.

# Step 4: Connecting to MongoDB Atlas from a Python Notebook

1. Install the `pymongo` library in your Python notebook by running the following command:

!pip install pymongo[srv]

2. Get your MongoDB connection string from the Atlas dashboard by clicking 'Connect' on your cluster.

3. Select 'Connect your application' and copy the connection string. Replace `<password>` with the password you created for the database user.

4. Use the following code to connect to your MongoDB Atlas cluster and access the `sample\_mflix` database:

from pymongo import MongoClient  
connection\_string = 'mongodb+srv://<username>:<password>@<cluster\_url>/test?retryWrites=true&w=majority'  
client = MongoClient(connection\_string)  
db = client['sample\_mflix']  
collection = db['movies']  
print(collection.find\_one())

Now you are connected to MongoDB Atlas from your Python notebook! You can start querying the `sample\_mflix` database and explore the movie dataset. If you need further assistance, check out MongoDB's official documentation.