

## MongoDB Screenshots

```
Command Prompt - "C:\Users\kendr" X Command Prompt X Command Prompt X + v
Microsoft Windows [Version 10.0.26100.4061]
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C:\Users\kendr>"C:\Users\kendr\Downloads\mongodb-database-tools-windows-x86_64-100.12.2\bin\mongoimport.exe" ^
More? --db iris_db ^
More? --collection iris ^
More? --type csv ^
More? --headerline ^
More? --file "C:\Users\kendr\OneDrive\Documents\IRIS_PROJ\iris_mongodb.csv"
2025-06-08T19:35:15.718-0700    connected to: mongodb://localhost/
2025-06-08T19:35:15.763-0700    150 document(s) imported successfully. 0 document(s) failed to import.

C:\Users\kendr>
```

```
Command Prompt - "C:\Users\kendr" X mongosh mongodb://localhost X + v
Microsoft Windows [Version 10.0.26100.4061]
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C:\Users\kendr>"C:\Users\kendr\Downloads\mongosh-2.5.2-win32-x64\bin\mongosh.exe" "mongodb://localhost:27017/iris_db"
Current Mongosh Log ID: 68464c610c98d29cd550eb66
Connecting to:      mongodb://localhost:27017/iris_db?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.5.2
Using MongoDB:      8.0.10
Using Mongosh:       2.5.2

For mongosh info see: https://www.mongodb.com/docs/mongodb-shell/

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The server generated these startup warnings when booting
2025-06-08T19:51:51.896-07:00: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
2025-06-08T19:51:51.897-07:00: This server is bound to localhost. Remote systems will be unable to connect to this server. Start the server with --bind_ip <address> to specify which IP addresses it should serve responses from, or with --bind_ip_all to bind to all interfaces. If this behavior is desired, start the server with --bind_ip 127.0.0.1 to disable this warning
-----

iris_db>
```

Confirm how many records/samples exist for each iris species

```
iris_db> db.iris.aggregate([
...   { $group: { _id: "$species", count: { $sum: 1 } } }
... ])
...
...
[
  { _id: 'virginica', count: 50 },
  { _id: 'setosa', count: 50 },
  { _id: 'versicolor', count: 50 }
]
iris_db>
```

Check for missing data

```
... db.iris.find({ $or: [
...   { sepal_length: { $exists: false } },
...   { sepal_width: { $exists: false } },
...   { petal_length: { $exists: false } },
...   { petal_width: { $exists: false } },
...   { species: { $exists: false } }
... ] }).count()
...
0
iris_db>
```

## Summary stats for the dataset

```
iris_db> db.iris.aggregate([
...   {
...     $group: {
...       _id: null,
...       avg_sepal_length: { $avg: "$sepal_length" },
...       min_sepal_length: { $min: "$sepal_length" },
...       max_sepal_length: { $max: "$sepal_length" },
...       avg_sepal_width: { $avg: "$sepal_width" },
...       min_sepal_width: { $min: "$sepal_width" },
...       max_sepal_width: { $max: "$sepal_width" },
...       avg_petal_length: { $avg: "$petal_length" },
...       min_petal_length: { $min: "$petal_length" },
...       max_petal_length: { $max: "$petal_length" },
...       avg_petal_width: { $avg: "$petal_width" },
...       min_petal_width: { $min: "$petal_width" },
...       max_petal_width: { $max: "$petal_width" }
...     }
...   }
... ])
...
[
  {
    _id: null,
    avg_sepal_length: 5.843333333333334,
    min_sepal_length: 4.3,
    max_sepal_length: 7.9,
    avg_sepal_width: 3.0540000000000003,
    min_sepal_width: 2,
    max_sepal_width: 4.4,
    avg_petal_length: 3.7586666666666666,
    min_petal_length: 1,
    max_petal_length: 6.9,
    avg_petal_width: 1.1986666666666668,
    min_petal_width: 0.1,
    max_petal_width: 2.5
  }
]
iris_db>
```



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## Determine the average petal length of each species

```
iris_db> db.iris.aggregate([
...   { $group: {
...     _id: "$species",
...     avg_petal_length: { $avg: "$petal_length" }
...   }}
... ])
...
...
[
  { _id: 'setosa', avg_petal_length: 1.464 },
  { _id: 'versicolor', avg_petal_length: 4.26 },
  { _id: 'virginica', avg_petal_length: 5.5520000000000005 }
]
iris_db>
```

## Determine the average sepal length of each species

```
iris_db> db.iris.aggregate([
...   {
...     $group: {
...       _id: "$species",           // Group by species
...       avg_sepal_length: { $avg: "$sepal_length" } // Calculate average sepal_length
...     }
...   }
... ])
...
...
[
  { _id: 'virginica', avg_sepal_length: 6.587999999999999 },
  { _id: 'setosa', avg_sepal_length: 5.006 },
  { _id: 'versicolor', avg_sepal_length: 5.936 }
]
iris_db> |
```

### Top 5 largest record samples for petal width

```
iris_db> db.iris.find().sort({ petal_width: -1 }).limit(5)
[
  {
    _id: ObjectId('684648635923fb163ecc69aa'),
    sepal_length: 6.7,
    sepal_width: 3.3,
    petal_length: 5.7,
    species: 'virginica',
    petal_width: 2.5
  },
  {
    _id: ObjectId('684648635923fb163ecc6994'),
    sepal_length: 6.3,
    sepal_width: 3.3,
    petal_length: 6,
    species: 'virginica',
    petal_width: 2.5
  },
  {
    _id: ObjectId('684648635923fb163ecc6985'),
    sepal_length: 7.2,
    sepal_width: 3.6,
    petal_length: 6.1,
    species: 'virginica',
    petal_width: 2.5
  },
  {
    _id: ObjectId('684648635923fb163ecc69a5'),
    sepal_length: 6.7,
    sepal_width: 3.1,
    petal_length: 5.6,
    species: 'virginica',
    petal_width: 2.4
  },
  {
    _id: ObjectId('684648635923fb163ecc69a1'),
    sepal_length: 6.3,
    sepal_width: 3.4,
    petal_length: 5.6,
    species: 'virginica',
    petal_width: 2.4
  }
]
iris_db>
```



## Top 5 largest record samples for petal length

```
iris_db> db.iris.find().sort({ petal_length: -1 }).limit(5)
[
  {
    _id: ObjectId('684648635923fb163ecc6990'),
    sepal_length: 7.7,
    sepal_width: 2.6,
    petal_length: 6.9,
    species: 'virginica',
    petal_width: 2.3
  },
  {
    _id: ObjectId('684648635923fb163ecc69af'),
    sepal_length: 7.7,
    sepal_width: 2.8,
    petal_length: 6.7,
    species: 'virginica',
    petal_width: 2
  },
  {
    _id: ObjectId('684648635923fb163ecc698d'),
    sepal_length: 7.7,
    sepal_width: 3.8,
    petal_length: 6.7,
    species: 'virginica',
    petal_width: 2.2
  },
  {
    _id: ObjectId('684648635923fb163ecc6989'),
    sepal_length: 7.6,
    sepal_width: 3,
    petal_length: 6.6,
    species: 'virginica',
    petal_width: 2.1
  },
  {
    _id: ObjectId('684648635923fb163ecc699b'),
    sepal_length: 7.9,
    sepal_width: 3.8,
    petal_length: 6.4,
    species: 'virginica',
    petal_width: 2
  }
]
iris_db>
```



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