

How can I calculate the average value of a field in MongoDB?

Authored by
stats writer

June 30, 2024

RECOMMENDED CITATION

stats writer (2024). *How can I calculate the average value of a field in MongoDB?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=162474>

To calculate the average value of a field in MongoDB, you can use the aggregate function along with the \$avg operator. This allows you to find the average of all the values in a specific field within a collection. The syntax for this operation involves specifying the collection, using the \$group function, and then using the \$avg operator to calculate the average. This method is useful for analyzing and summarizing data in a MongoDB database, allowing you to easily determine the average value of a specific field.

MongoDB: Calculate the Average Value of a Field

You can use the following methods to calculate the average value of a field in MongoDB:

Method 1: Calculate Average of Field

```
db.collection.aggregate()
```

Method 2: Calculate Average of Field by Group

```
db.collection.aggregate()
```

The following examples show how to use each method with a collection teams with the following documents:

```
db.teams.insertOne({team: "Mavs", points: 30, rebounds: 8})
```

```
db.teams.insertOne({team: "Mavs", points: 30, rebounds: 12})
```

```
db.teams.insertOne({team: "Spurs", points: 20,
```

```
rebounds: 7})
```

```
db.teams.insertOne({team: "Spurs", points: 25,  
rebounds: 5})
```

```
db.teams.insertOne({team: "Spurs", points: 25,  
rebounds: 9})
```

Example 1: Calculate Average of Field

We can use the following code to calculate the average value of the points field:

```
db.teams.aggregate()
```

This query returns the following results:

```
{ _id: null, avg_val: 26 }
```

From the results we can see that the average value in the points field is 26.

We can manually verify this is correct by calculating the average of the points values by hand:

Average of Points: $(30 + 30 + 20 + 25 + 25) / 5 = 26$.

Example 2: Calculate Average of Field by Group

We can use the following code to calculate the average value of the points field, grouped by the team field:

```
db.teams.aggregate()
```

This query returns the following results:

```
{ _id: 'Spurs', avg_val: 23.333333333333332 }  
{ _id: 'Mavs', avg_val: 30 }
```

From the results we can see:

The average points value for the Spurs is 23.33. The average points value for the Mavs is 30.

Note: You can find the complete documentation for the `$avg` function .

Additional Resources

The following tutorials explain how to perform other common operations in MongoDB: