## Group Summary Statistics: Takeaways 🖻

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## Syntax

• Computing summary statistics by a unique value in a row:

```
SELECT SUM(Employed)

FROM recent_grads

GROUP BY Major_category;
```

• Filtering results after aggregation:

```
SELECT Major_category, AVG(Employed) / AVG(Total) AS share_employed

FROM recent_grads

GROUP BY Major_category

HAVING share_employed > 0.8;
```

• Rounding a column to two decimal places:

```
SELECT Major_category, ROUND(ShareWomen, 2) AS rounded_share_women
FROM recent_grads;
```

• Generating information about each column in a table:

```
PRAGMA TABLE_INFO(recent_grads);
```

• Converting, known as casting, a column to a float type:

```
SELECT CAST(Women as Float) / CAST(Total as Float)
FROM recent_grads;
```

## Concepts

- The **GROUPBY** clause allows you to compute summary statistics by group.
- The **HAVING** clause filters on the virtual column that **GROUPBY** generates.
- **WHERE** filters results before the aggregation, whereas **HAVING** filters after aggregation.

- The **ROUND** function rounds the results to desired decimal places.
- **PRAGMATABLE\_INFO**() returns the type, along with other information for each column.
- The CAST function in SQL converts data from one data type to another. For example, we can use the CAST function to convert numeric data into character string data.

## Resource

- PRAGMA TABLE INFO
- Core functions of SQLite



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