**CineCube Report**This is a report on the Min of hours\_per\_week when occupation is fixed to 'Blue-collar' and education is fixed to 'Post-Secondary'. We will start by answering the original query and we complement the result with contextualization and detailed analyses.

**Answer to the original question**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Craft-repair | Handlers-cleaners | Machine-op-inspct | Priv-house-serv | Tech-support | Transport-moving |
|  | Assoc | 5.00 | 15.00 | 15.00 | 20.00 | 3.00 | 15.00 |
|  | Post-grad | 10.00 | 12.00 | 20.00 | - | 11.00 | 10.00 |
|  | Some-college | 3.00 | 6.00 | 14.00 | 6.00 | 9.00 | 6.00 |
|  | University | 4.00 | 15.00 | 7.00 | 24.00 | 7.00 | 5.00 |

Here, you can see the answer of the original query. You have specified occupation to be equal to 'Blue-collar', and education to be equal to 'Post-Secondary'. We report on Min of hours\_per\_week grouped by occupation at level 0, and education at level 2 .  
You can observe the results in this table. We highlight the largest values with red and the lowest values with blue color.   
Column Handlers-cleaners has 4 of the 13 highest values.  
Column Machine-op-inspct has 4 of the 13 highest values.  
Column Craft-repair has 5 of the 9 lowest values.  
Row Assoc has 8 of the 13 highest values.  
Row Post-grad has 2 of the 13 highest values.  
Row University has 3 of the 13 highest values.  
Row Assoc has 4 of the 9 lowest values.  
Row Some-college has 2 of the 9 lowest values.  
Row University has 3 of the 9 lowest values.

**Act I: Putting results in context**In this series of slides we put the original result in context, by comparing the behavior of its defining values with the behavior of values that are similar to them.

**Assessing the behavior of occupation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Summary for occupation | **Blue-collar** | Other | white-collar |
|  | Assoc | **3.00** | 3.00 | 2.00 |
|  | Post-grad | **10.00** | 14.00 | 1.00 |
|  | Some-college | **3.00** | 3.00 | 1.00 |
|  | University | **4.00** | 2.00 | 2.00 |

In this graphic, we put the original request in context by comparing the value 'Blue-collar' for occupation at level 1 with its sibling values. We highlight the reference cells with bold, the highest values with red and the lowest values with blue color. We calculate the Min of hours\_per\_week while fixing occupation at level 2 to be equal to ''ALL'', and education at level 3 to be equal to ''Post-Secondary''.  
Compared to its sibling we observe the following:  
In 1 out of 4 cases Blue-collar has higher value than Other.  
In 1 out of 4 cases Blue-collar has lower value than Other.  
In 2 out of 4 cases Blue-collar has equal value than Other.  
In 4 out of 4 cases Blue-collar has higher value than white-collar.

**Assessing the behavior of education**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Summary for education | Craft-repair | Handlers-cleaners | Machine-op-inspct | Priv-house-serv | Tech-support | Transport-moving |
|  | **Post-Secondary** | **3.00** | **6.00** | **7.00** | **6.00** | **3.00** | **5.00** |
|  | Without-Post-Secondary | 1.00 | 2.00 | 1.00 | 4.00 | 10.00 | 10.00 |

In this graphic, we put the original request in context by comparing the value 'Post-Secondary' for education at level 3 with its sibling values. We highlight the reference cells with bold, the highest values with red and the lowest values with blue color. We calculate the Min of hours\_per\_week while fixing occupation at level 1 to be equal to ''Blue-collar'', and education at level 4 to be equal to ''ALL''.  
Compared to its sibling we observe that in 4 out of 6 cases Post-Secondary has a higher value than Without-Post-Secondary.  
In 2 out of 6 cases Post-Secondary has a lower value than Without-Post-Secondary.

**Act II: Explaining results**In this series of slides we will present a detailed analysis of the values involved in the result of the original query. To this end, we drill-down the hierarchy of grouping levels of the result to one level of aggregation lower, whenever this is possible.

**Drilling down the Rows of the Original Result**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *Assoc* |  | Craft-repair | Handlers-cleaners | Machine-op-inspct | Priv-house-serv | Tech-support | Transport-moving |
|  |  | Assoc-acdm | 5.00 (114) | 15.00 (22) | 15.00 (33) | 35.00 (2) | 10.00 (72) | 20.00 (27) |
|  |  | Assoc-voc | 10.00 (248) | 25.00 (28) | 20.00 (62) | 20.00 (4) | 3.00 (126) | 15.00 (40) |
|  | *Post-grad* |  |  |  |  |  |  |  |
|  |  | Doctorate | 50.00 (2) | - | 40.00 (1) | - | 20.00 (2) | 45.00 (1) |
|  |  | Masters | 10.00 (21) | 12.00 (5) | 20.00 (8) | - | 11.00 (34) | 10.00 (9) |
|  | *Some-college* |  |  |  |  |  |  |  |
|  |  | Some-college | 3.00 (852) | 6.00 (262) | 14.00 (307) | 6.00 (15) | 9.00 (271) | 6.00 (280) |
|  | *University* |  |  |  |  |  |  |  |
|  |  | Bachelors | 4.00 (220) | 15.00 (48) | 7.00 (59) | 24.00 (6) | 7.00 (223) | 20.00 (55) |
|  |  | Prof-school | 40.00 (7) | - | - | - | 24.00 (7) | 5.00 (3) |

In this slide, we expand dimension education by drilling down from level 2 to level 1. For each cell we show both the Min of hours\_per\_week and the number of tuples that correspond to it in parentheses. We highlight the 20 lowest values in blue and the 18 largest in red color.  
Some interesting findings include:  
Column Machine-op-inspct has 4 of the 18 highest values.  
Column Priv-house-serv has 4 of the 18 highest values.  
Column Craft-repair has 5 of the 20 lowest values.  
Column Transport-moving has 5 of the 20 lowest values.

**Summary**-In this slide we summarize our findings.  
-Concerning the original query, some interesting findings include:  
-Column Handlers-cleaners has 4 of the 13 highest values.  
-Column Machine-op-inspct has 4 of the 13 highest values.  
-Column Craft-repair has 5 of the 9 lowest values.  
-Row Assoc has 8 of the 13 highest values.  
-Row Post-grad has 2 of the 13 highest values.  
-Row University has 3 of the 13 highest values.  
-Row Assoc has 4 of the 9 lowest values.  
-Row Some-college has 2 of the 9 lowest values.  
-Row University has 3 of the 9 lowest values.  
-  
-  
-First, we tried to put the original result in context, by comparing its defining values with similar ones.  
-When we compared Blue-collar to its siblings, grouped by occupation and education, we observed the following:  
-  
-In 1 out of 4 cases Blue-collar has higher value than Other.  
-In 1 out of 4 cases Blue-collar has lower value than Other.  
-In 2 out of 4 cases Blue-collar has equal value than Other.  
-In 4 out of 4 cases Blue-collar has higher value than white-collar.  
-When we compared Post-Secondary to its siblings, grouped by occupation and education, we observed the following:  
-In 4 out of 6 cases Post-Secondary has a higher value than Without-Post-Secondary.  
-In 2 out of 6 cases Post-Secondary has a lower value than Without-Post-Secondary.  
-  
-Then we analyzed the results by drilling down one level in the hierarchy.  
-When we drilled down education, we observed the following facts:  
-  
-Column Machine-op-inspct has 4 of the 18 highest values.  
-Column Priv-house-serv has 4 of the 18 highest values.  
-Column Craft-repair has 5 of the 20 lowest values.  
-Column Transport-moving has 5 of the 20 lowest values.