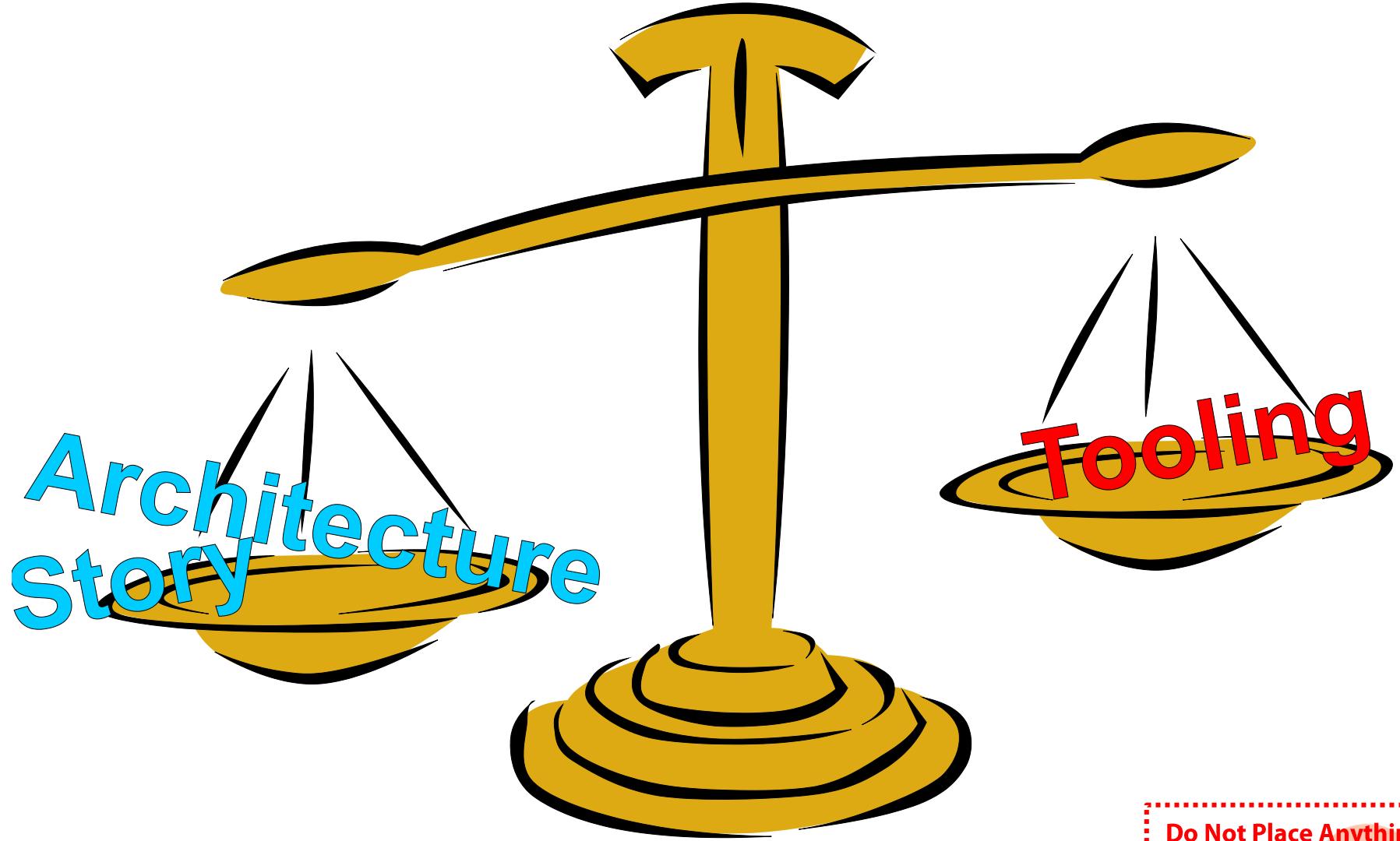


Hands-On Visualization

Dan Appleman
danappleman.com
[@danappleman](https://twitter.com/danappleman)



pluralsight 
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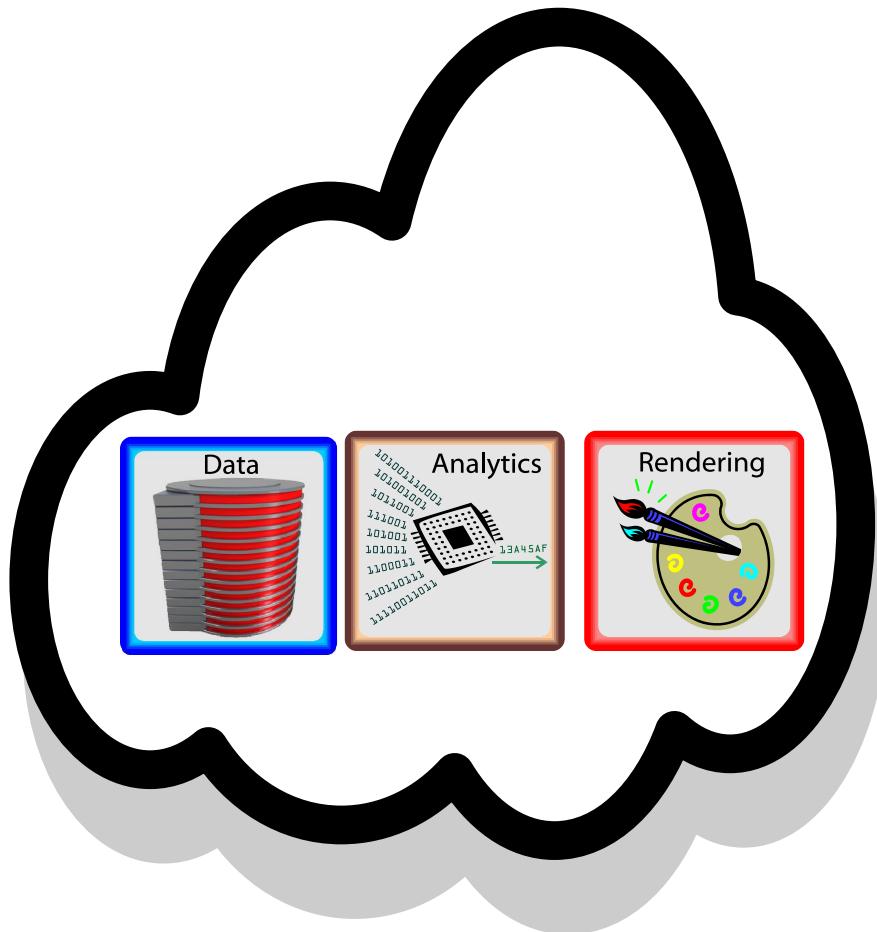
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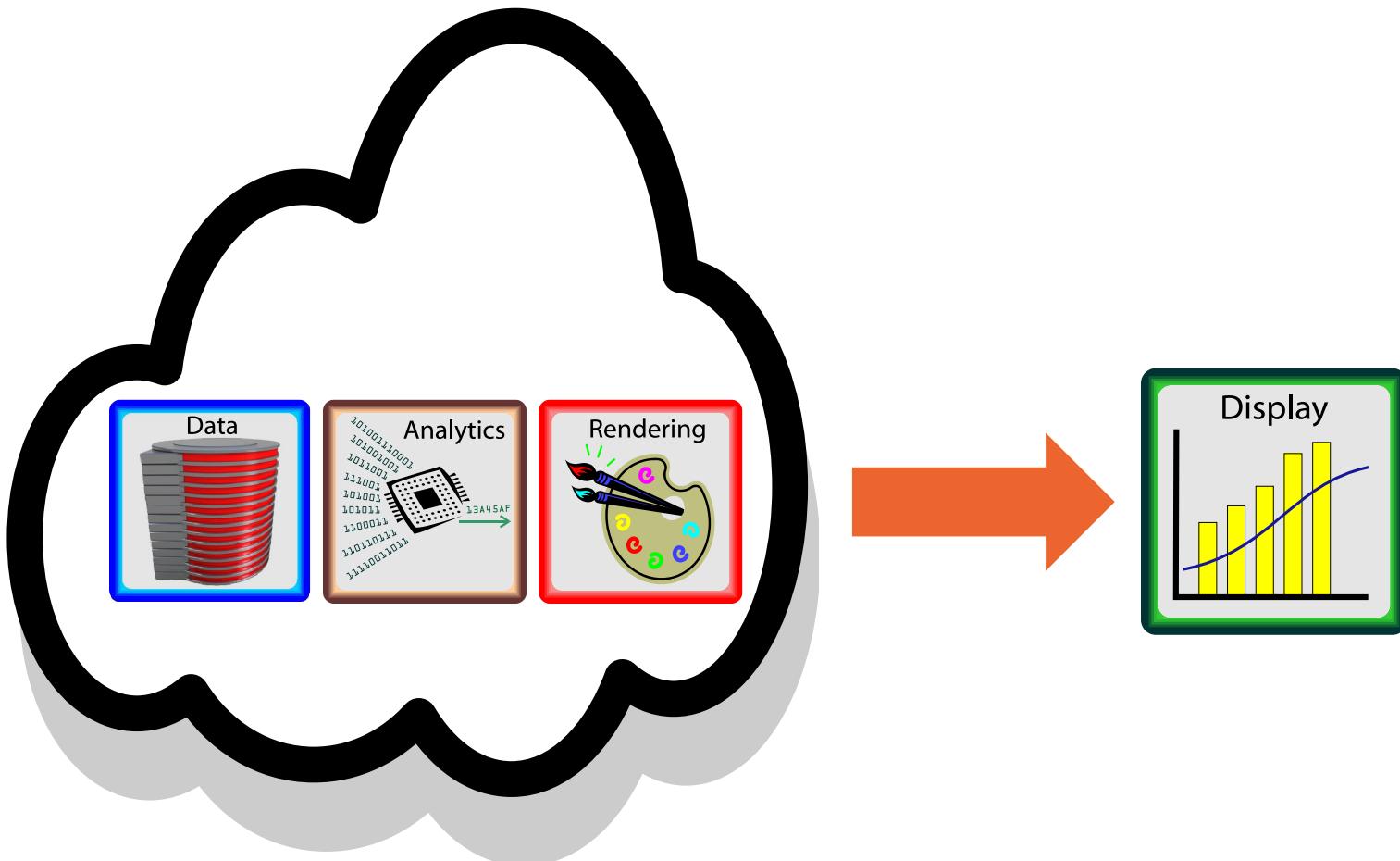
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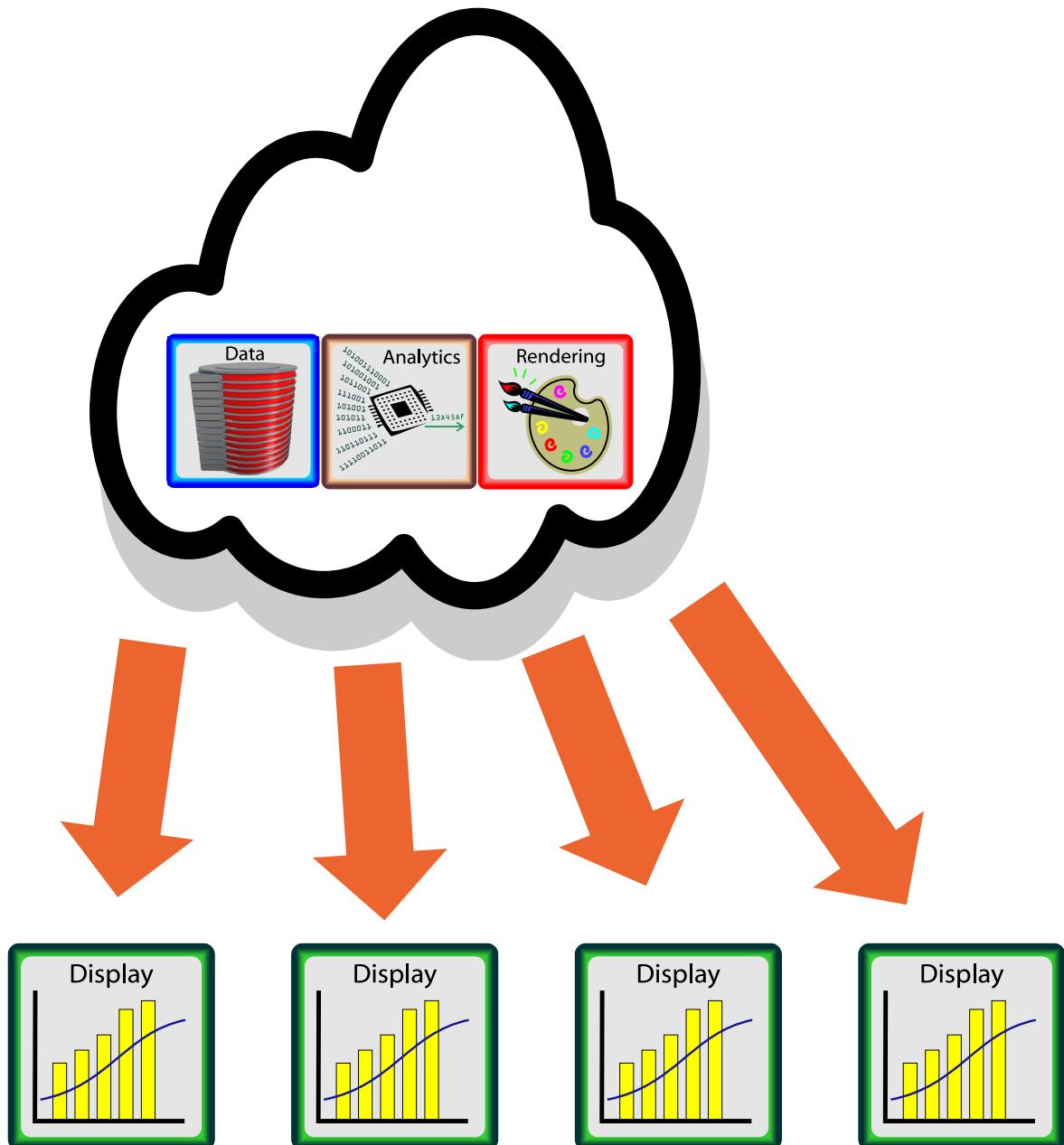
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2004 – High School Educated

- 2500-4999 Bracket – 2.578 million @ 3,762
- 5000-7499 Bracket – 4.351 million @ 6,274
- 2500-4999 Bracket – Total income = $2,578,000 * 3,762 = 9,698,436,000$
- 5000-7499 Bracket – Total income = $4,351,000 * 6,274 = 27,298,174,000$
- New 2500-7499 Bracket = $2.578 + 4.351 = 6.929$ million people
36,996,610,000 total income
average income = 5,339.39

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Data Points

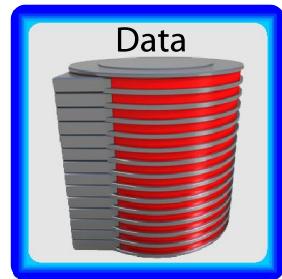
- Year
- Highest Education Level Achieved
- Population (in thousands)
- Mean income for that population

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A bit of terminology...



Custom Object



Reporting and Dashboards



VisualForce

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Remote Database - Local Analytics & Display



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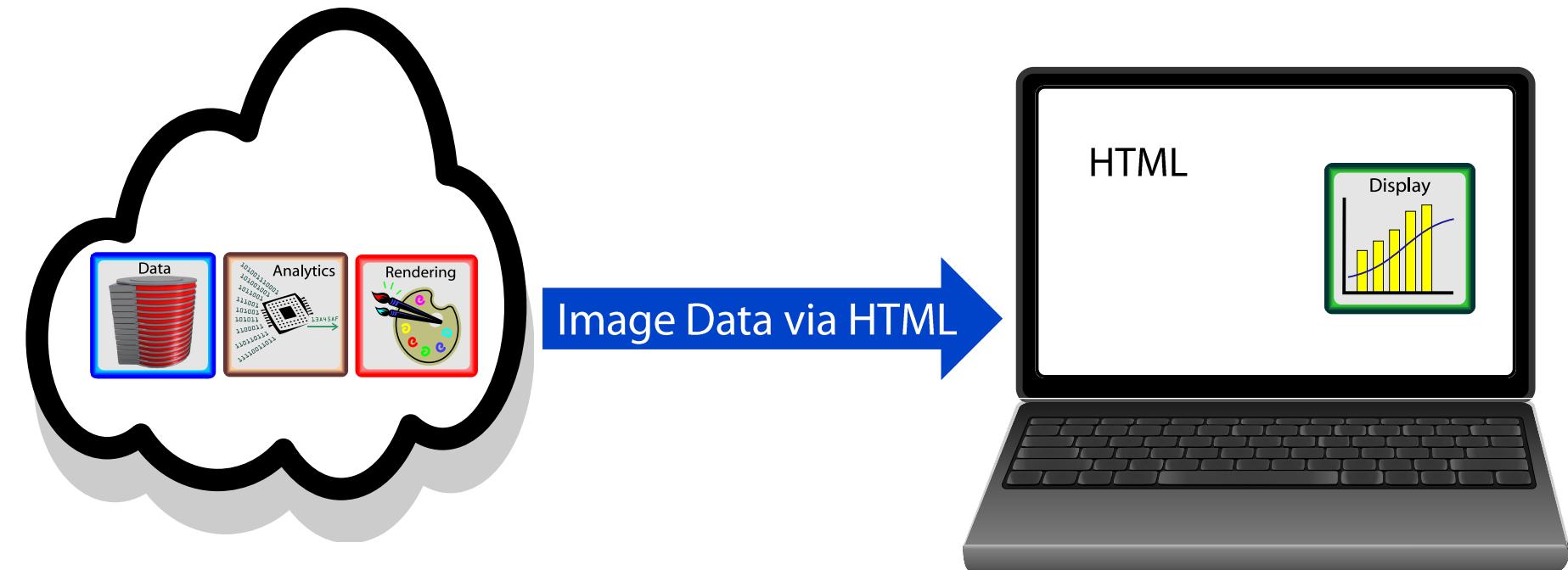
How Does Income Vary By Education?

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Remote Database, Analytics and Rendering

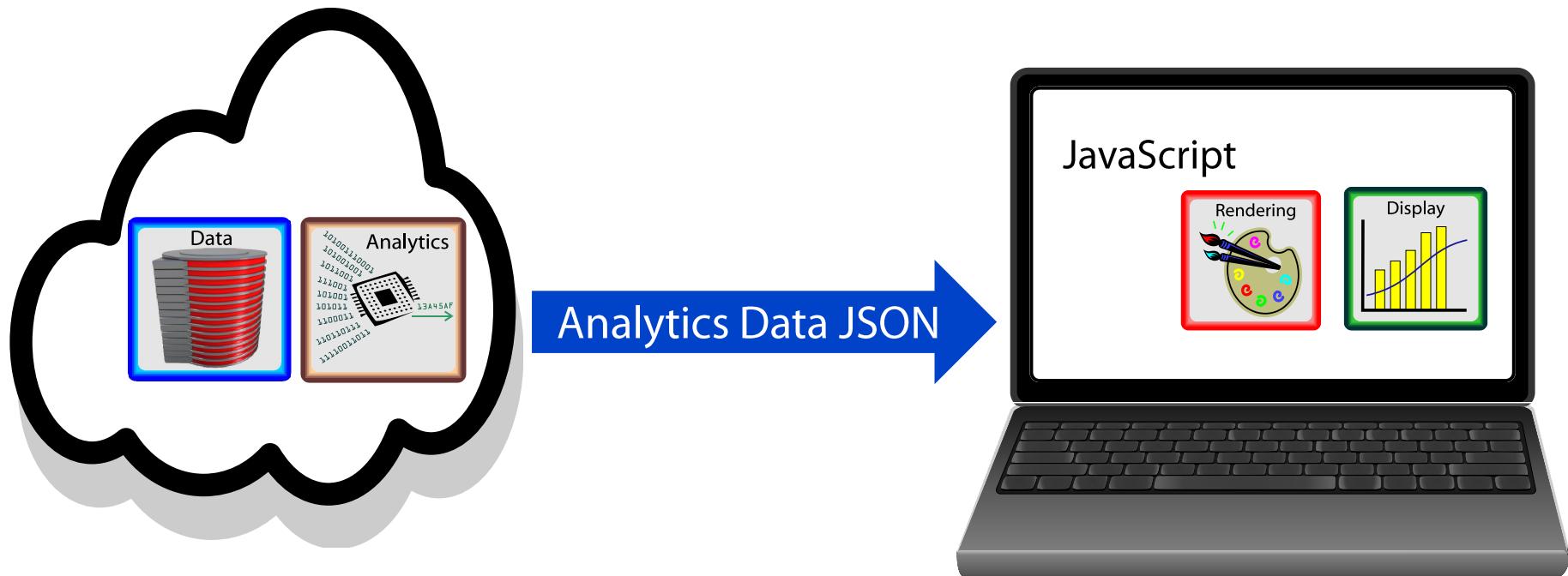


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Remote Database & Analytics – Local Rendering



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		Bracket 1	Bracket 2	Bracket 3	Bracket 4
Year 1	Education Levels				
Year 2	Education Levels				
Year 3	Education Levels				
Year 4	Education Levels				

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during Slide Show view.

```
{
    "hasDetailRows": false,
    "attributes": {
        "describeUrl": "/services/data/v29.0/analytics/reports/00oi0000005ebBkEAI/describe",
        "instancesUrl": "/services/data/v29.0/analytics/reports/00oi0000005ebBkEAI/instances",
        "type": "Report",
        "reportId": "00oi0000005ebBkEAI",
        "reportName": "Education Income Distribution"
    },
    "reportExtendedMetadata": {
        "detailColumnInfo": {
            "Education_Item__c.Population__c": {
                "label": "Population",
                "dataType": "double"
            }
        },
        "aggregateColumnInfo": {
            "s!Education_Item__c.Population__c": {
                "label": "Sum of Population",
                "dataType": "double",
                "acrossGroupingContext": null,
                "downGroupingContext": null
            }
        },
        "FORMULA3": {
            "label": "AverageForGroup",
            "dataType": "double",
            "acrossGroupingContext": "BucketField_63780512",
            "downGroupingContext": "00Ni000000E2u7h"
        }
    },
    "groupingColumnInfo": {
        "BucketField_63780512": {
            "label": "Income Bracket",
            "dataType": "string",
            "groupingLevel": 0
        }
    }
}
```

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```
"reportMetadata": {
    "name": "Education Income Distribution",
    "id": "000i0000005ebBKEAI",
    "reportType": {
        "type": "CustomEntity$Education_Item__c",
        "label": "Custom Object"
    },
    "reportFormat": "MATRIX",
    "currency": null,
    "developerName": "Education_Income_Distribution",
    "aggregates": ["s!Education_Item__c.Population__c", "FORMULA3"],
    "groupingsDown": [
        {
            "name": "Education_Item__c.Year__c",
            "sortOrder": "Asc",
            "dateGranularity": "None"
        },
        {
            "name": "Education_Item__c.Education__c",
            "sortOrder": "Asc",
            "dateGranularity": "None"
        }
    ],
    "groupingsAcross": [
        {
            "name": "BucketField_63780512",
            "sortOrder": "Asc",
            "dateGranularity": "None"
        }
    ],
    "reportBooleanFilter": null,
    "reportFilters": [],
    "detailColumns": ["Education_Item__c.Population__c"]
},
```

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```
"groupingsDown": {  
    "groupings": [{  
        "value": 2004,  
        "key": "0",  
        "label": "2,004",  
        "groupings": [{  
            "value": "No High School",  
            "key": "0_0",  
            "label": "No High School",  
            "groupings": []  
        }, {  
            "value": "Some High School",  
            "key": "0_1",  
            "label": "Some High School",  
            "groupings": []  
        }, {  
            "value": "High School Grad",  
            "key": "0_2",  
            "label": "High School Grad",  
            "groupings": []  
        }, {  
            "value": "Some College",  
            "key": "0_3",  
            "label": "Some College",  
            "groupings": []  
        }, {  
            "value": "AA Degree",  
            "key": "0_4",  
            "label": "AA Degree",  
            "groupings": []  
        }, {  
            "value": "Bachelor's Degree",  
            "key": "0_5",  
            "label": "Bachelor's Degree",  
            "groupings": []  
        }  
    },  
}
```

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```
"factMap": {  
    "0_4!T": {  
        "aggregates": [{  
            "value": 16830,  
            "label": "16,830"  
        },  
        null]  
    },  
    "4_3!T": {  
        "aggregates": [{  
            "value": 41861,  
            "label": "41,861"  
        },  
        null]  
    },  
    "4_1!T": {  
        "aggregates": [{  
            "value": 17753,  
            "label": "17,753"  
        },  
        null]  
    },  
    "3_2!2": {  
        "aggregates": [{  
            "value": 10225,  
            "label": "10,225"  
        }, {  
            "value": 24327.78562347,  
            "label": "24,328"  
        }]  
    },  
    "0_0!3": {  
        "aggregates": [{  
            "value": 823,  
            "label": "823"  
        }, {  
    
```

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during Slide Show view.

		Bracket 1	Bracket 2	Bracket 3	Bracket 4
Year 1	Education Levels				
Year 2	Education Levels				
Year 3	Education Levels				
Year 4	Education Levels				

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Year 1	Education Levels				
Year 2	Education Levels				
Year 3	Education Levels				
Year 4	Education Levels				

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Year 2	Education Levels				
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Year 4	Education Levels				

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		Bracket 1	Bracket 2	Bracket 3	Bracket 4
Year 1	Education Levels				
Year 2	Education Levels				
Year 3	Education Levels				
Year 4	Education Levels				

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		Bracket 1	Bracket 2	Bracket 3	Bracket 4
Year 1	Education Levels				
Year 2	Education Levels				
Year 3	Education Levels				
Year 4	Education Levels				



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		Bracket 1	Bracket 2	Bracket 3	Bracket 4
Year 1	Education Levels	↓	↓	↓	↓
Year 2	Education Levels	↓	↓	↓	↓
Year 3	Education Levels	↓	↓	↓	↓
Year 4	Education Levels	↓	↓	↓	↓

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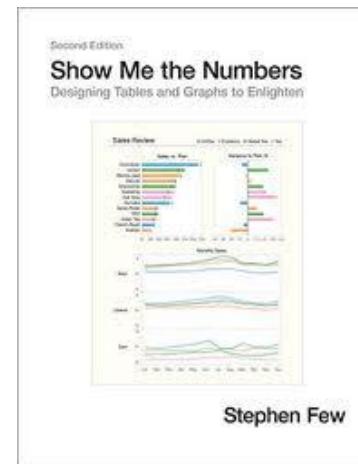
		Bracket 1	Bracket 2	Bracket 3	Bracket 4
Year 1	Education Levels				
Year 2	Education Levels				
Year 3	Education Levels				
Year 4	Education Levels				

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