



Aggregation Test Drive

car.txt

Data for test drive

Transaction ของการขายรถ

Manufacturer	Color	Price	Sold Date
Honda	Red	10000	2014-10-28
Ford	Green	30000	2014-05-18

Requirement

สีของรถที่ขายดีที่สุด ?

Count by color

GET /cars/_search?**search_type=count**

```
{  
  "aggs": {  
    "colors": {  
      "terms": {  
        "field": "color"  
      }  
    }  
  }  
}
```

Result

```
"aggregations": {  
  "colors": {  
    "doc_count_error_upper_bound": 0,  
    "sum_other_doc_count": 0,  
    "buckets": [  
      {  
        "key": "red",  
        "doc_count": 4  
      },  
      {  
        "key": "blue",  
        "doc_count": 2  
      },  
      {  
        "key": "green",  
        "doc_count": 2  
      }  
    ]  
  }  
}
```

Requirement

ราคาเฉลี่ยของรถแต่ละสี ?

Average price by color

GET /cars/_search?search_type=count

```
{  
  "aggs": {  
    "colors": {  
      "terms": {  
        "field": "color"  
      },
```

Sub-aggregation

```
    "aggs": {  
      "avg_price": {  
        "avg": {  
          "field": "price"  
        }  
      }  
    }  
  }  
}
```

```
}}}}
```

Result

```
"aggregations": {  
  "colors": {  
    "doc_count_error_upper_bound": 0,  
    "sum_other_doc_count": 0,  
    "buckets": [  
      {  
        "key": "red",  
        "doc_count": 4,  
        "avg_price": {  
          "value": 32500  
        }  
      },  
      {  
        "key": "blue",  
        "doc_count": 2,  
        "avg_price": {  
          "value": 20000  
        }  
      },  
      {  
        "key": "green",  
        "doc_count": 2,  
        "avg_price": {  
          "value": 21000  
        }  
      }  
    ]  
  }  
}
```


Requirement

ต้องการเห็นว่าในแต่ละสัปดาห์ทำอะไรบ้าง ?

Add make

GET /cars/_search?search_type=count

...

```
"aggs": {  
  "avg_price": {  
    "avg": {  
      "field": "price"  
    }  
  },  
  "make": {  
    "terms": {  
      "field": "make"  
    }  
  }  
}
```

Result

```
"buckets": [  
  {  
    "key": "red",  
    "doc_count": 4,  
    "avg_price": {  
      "value": 32500  
    },  
    "make": {  
      "doc_count_error_upper_bound": 0,  
      "sum_other_doc_count": 0,  
      "buckets": [  
        {  
          "key": "honda",  
          "doc_count": 3  
        },  
        {  
          "key": "bmw",  
          "doc_count": 1  
        }  
      ]  
    }  
  ],  
],
```

Requirement

ต้องการราคาสูงและต่ำสุดของแต่ละยี่ห้อ ?

Min/Max price by make

GET /cars/_search?search_type=count

...

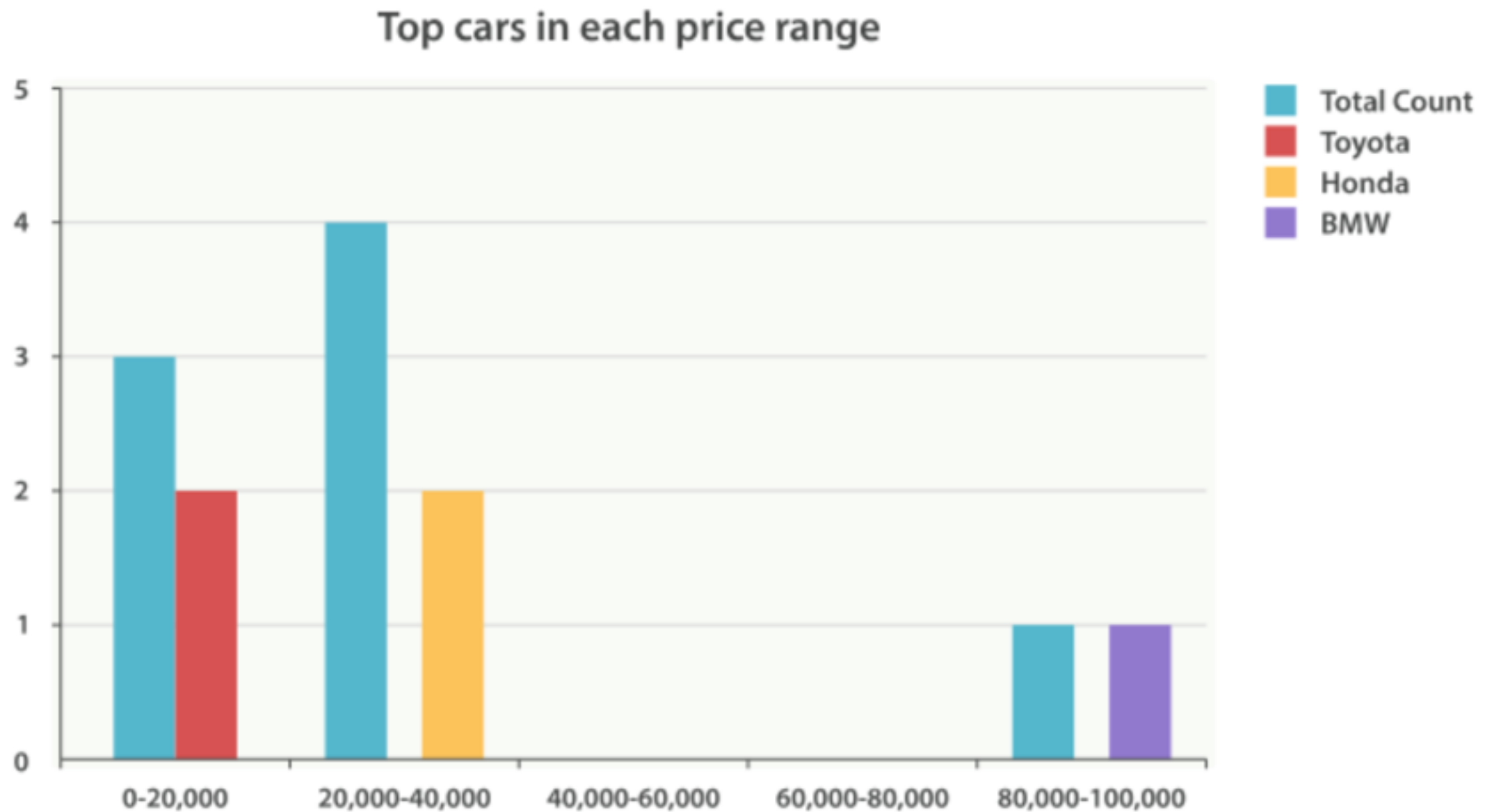
```
"make": {  
  "terms": {  
    "field": "make"  
  },  
  "aggs": {  
    "min_price": {  
      "min": { "field": "price" }},  
    "max_price" : {  
      "max": { "field": "price" }  
    }  
  }  
}
```

Result

```
"buckets": [  
  {  
    "key": "red",  
    "doc_count": 4,  
    "avg_price": {  
      "value": 32500  
    },  
    "make": {  
      "doc_count_error_upper_bound": 0,  
      "sum_other_doc_count": 0,  
      "buckets": [  
        {  
          "key": "honda",  
          "doc_count": 3,  
          "max_price": {  
            "value": 20000  
          },  
          "min_price": {  
            "value": 10000  
          }  
        },  
        {  
          "key": "toyota",  
          "doc_count": 1,  
          "max_price": {  
            "value": 15000  
          },  
          "min_price": {  
            "value": 15000  
          }  
        }  
      ],  
      "total": 4  
    }  
  ],  
  {  
    "key": "blue",  
    "doc_count": 1,  
    "avg_price": {  
      "value": 15000  
    },  
    "make": {  
      "doc_count_error_upper_bound": 0,  
      "sum_other_doc_count": 0,  
      "buckets": [  
        {  
          "key": "toyota",  
          "doc_count": 1,  
          "max_price": {  
            "value": 15000  
          },  
          "min_price": {  
            "value": 15000  
          }  
        }  
      ],  
      "total": 1  
    }  
  ]  
],  
"total": 5
```

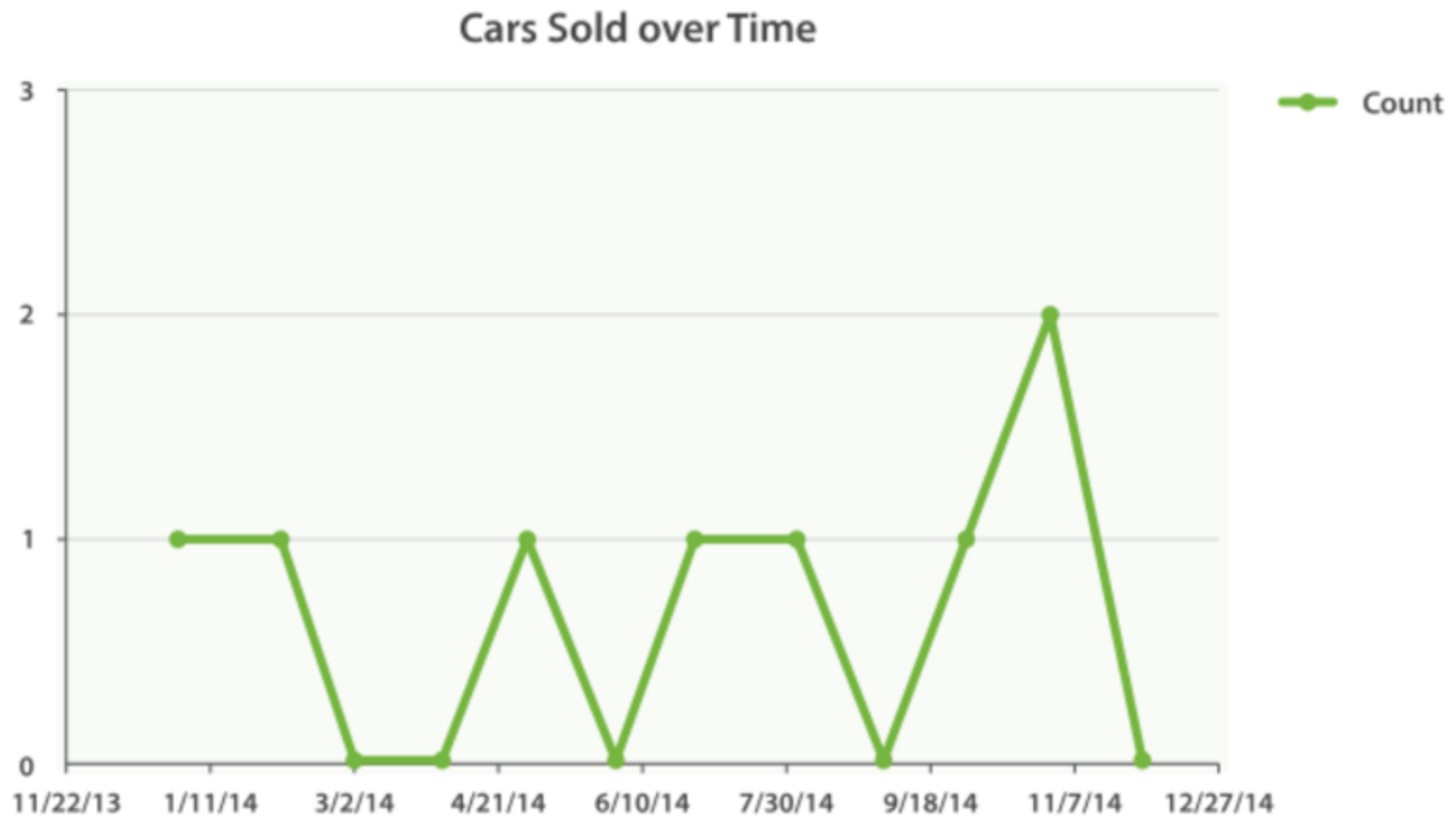
Workshop

ต้องการแสดงกราฟแบบนี้ล่ะ ?



Workshop

ต้องการแสดงกราฟแบบนี้ล่ะ ?



Date histogram

GET /cars/_search?search_type=count

```
{  
  "aggs": {  
    "sold": {  
      "date_histogram": {  
        "field": "sold",  
        "interval": "month"  
      }  
    }  
  }  
}
```

Problem ?

```
"aggregations": {  
  "sold": {  
    "buckets": [  
      {  
        "key_as_string": "2014-01-01",  
        "key": 1388534400000,  
        "doc_count": 1  
      },  
      {  
        "key_as_string": "2014-02-01",  
        "key": 1391212800000,  
        "doc_count": 1  
      },  
      {  
        "key_as_string": "2014-05-01",  
        "key": 1398902400000,  
        "doc_count": 1  
      },  
      {  
        "key_as_string": "2014-07-01",  
        "key": 1404172800000,  
        "doc_count": 1  
      },  
    ]  
  }  
}
```

Problem ?

```
"aggregations": {  
  "sold": {  
    "buckets": [  
      {  
        "key_as_string": "2014-01-01",  
        "key": 1388534400000,  
        "doc_count": 1  
      },  
      {  
        "key_as_string": "2014-02-01",  
        "key": 1391212800000,  
        "doc_count": 1  
      },  
      {  
        "key_as_string": "2014-05-01",  
        "key": 1398902400000,  
        "doc_count": 1  
      },  
      {  
        "key_as_string": "2014-07-01",  
        "key": 1404172800000,  
        "doc_count": 1  
      },  
    ]  
  }  
}
```

Return empty bucket

GET /cars/_search?search_type=count

```
{  
  "aggs": {  
    "sold": {  
      "date_histogram": {  
        "field": "sold",  
        "interval": "month",  
        "format": "yyyy-MM-dd",  
        "min_doc_count": 0  
      }  
    }  
  }  
}
```

Result

```
"buckets": [  
  {  
    "key_as_string": "2014-01-01",  
    "key": 1388534400000,  
    "doc_count": 1  
  },  
  {  
    "key_as_string": "2014-02-01",  
    "key": 1391212800000,  
    "doc_count": 1  
  },  
  {  
    "key_as_string": "2014-03-01",  
    "key": 1393632000000,  
    "doc_count": 0  
  },  
  {  
    "key_as_string": "2014-04-01",  
    "key": 1396310400000,  
    "doc_count": 0  
  },  
  {  
    "key_as_string": "2014-05-01",  
    "key": 1398902400000,  
    "doc_count": 1  
  },  
]
```

Requirement

ถ้าอยากได้ข้อมูลทุกเดือนละ ?

Return 12 months

GET /cars/_search?search_type=count

```
{  
  "aggs": {  
    "sold": {  
      "date_histogram": {  
        "field": "sold",  
        "interval": "month",  
        "format": "yyyy-MM-dd",  
        "min_doc_count": 0,  
        "extended_bounds" : {  
          "min" : "2014-01-01",  
          "max" : "2014-12-31"  
        }  
      }  
    }  
  }  
}
```