

# HackAZ Data Visualization Workshop Vega-Lite Summary

See <https://vega.github.io/> for full documentation

## Types of values

quantitative, ordinal, nominal, temporal

## Subset of Available Marks

area, bar, circle, line, point, rule, square tick, rect, text, geoshape, boxplot, errorbar, errorband

## Subset of Available Channels

x, y, x2, y2, color, opacity, size, shape, fillOpacity, strokeOpacity, strokeWidth, text, tooltip, href, xError, yError, xError2, yError2

## Subset of Available Aggregation Functions

count, sum, mean, average, median, variance, stdev, stderr, min, max, valid, missing, distinct

## Vega-Lite Specification Example

```
{
  "data": name_of_variable_or_data_file,
  "mark": "point",
  "title": "title for chart",
  "encoding": {
    "x": {
      "field": "column_name_or_key_name",
      "type": "quantitative",
      "aggregate": "mean",
      "axis": { "title": "my custom axis label" }
    },
    "color": {
      "field": "other key name",
      "type": "ordinal",
      "scale": {
        "range": [ 'white', 'blue' ]
      }
    }
  }
}
```

## Adding a Tooltip to a Mark

```
"mark": { "type": "point", "tooltip": { "content": "data" } }
```

Histograms – Add `"bin": true` to encoding