

# ResBaz Data Visualization Workshop Vega-Lite Summary

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

<https://vega.github.io/vega-lite/docs/encoding.html> is a good starting point for encodings

## 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": { "values": name_of_variable_array_of_data },
  "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' ]
      }
    }
  }
}
```

**\*\* Note the placement of commas. Between any braces {} or brackets [], every "key": "value" pair is followed by a comma EXCEPT the last one.**

## Adding a Tooltip to a Mark

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

Histograms – Add "bin": true to encoding