# **Marks** Text Description automatically generated

# **Visual Variable/ChannelGraphical user interface Description automatically generated with low confidence**

# **Visual Variable/Channel characteristics**

Text

Description automatically generated

# **Visual Variable/Channel attributes**

Chart, scatter chart

Description automatically generated

Chart

Description automatically generated

Diagram

Description automatically generated

Checking attributes vs characteristics

## **Position**

A picture containing diagram

Description automatically generated

## **Size**

Diagram, shape, rectangle

Description automatically generated

We can say this animal is bigger/smaller 🡪 But not how much big/small ???

## **Shape**

Table

Description automatically generated with low confidence

Diagram

Description automatically generated

## **Saturation/Lightness ValueA screenshot of a computer Description automatically generated with low confidence**

Quantify 🡪 we cannot say how much one saturation is bigger/smaller than the other.

Diagram

Description automatically generated with medium confidence

## **Color**

A picture containing diagram

Description automatically generated

## **Orientation**

Rectangle

Description automatically generated with low confidence

## **Texture**

A picture containing text, screenshot

Description automatically generated

A picture containing table

Description automatically generated

# **Expressiveness principle**

Text

Description automatically generated

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# **Effectiveness Principles**

Text

Description automatically generated

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# **Channel Effectiveness**

## **Accuracy Discriminability**

## **Separability**

## **Pop out**

Visual pop-out is often called pre-attentive processing or tunable detection.

## **Grouping**