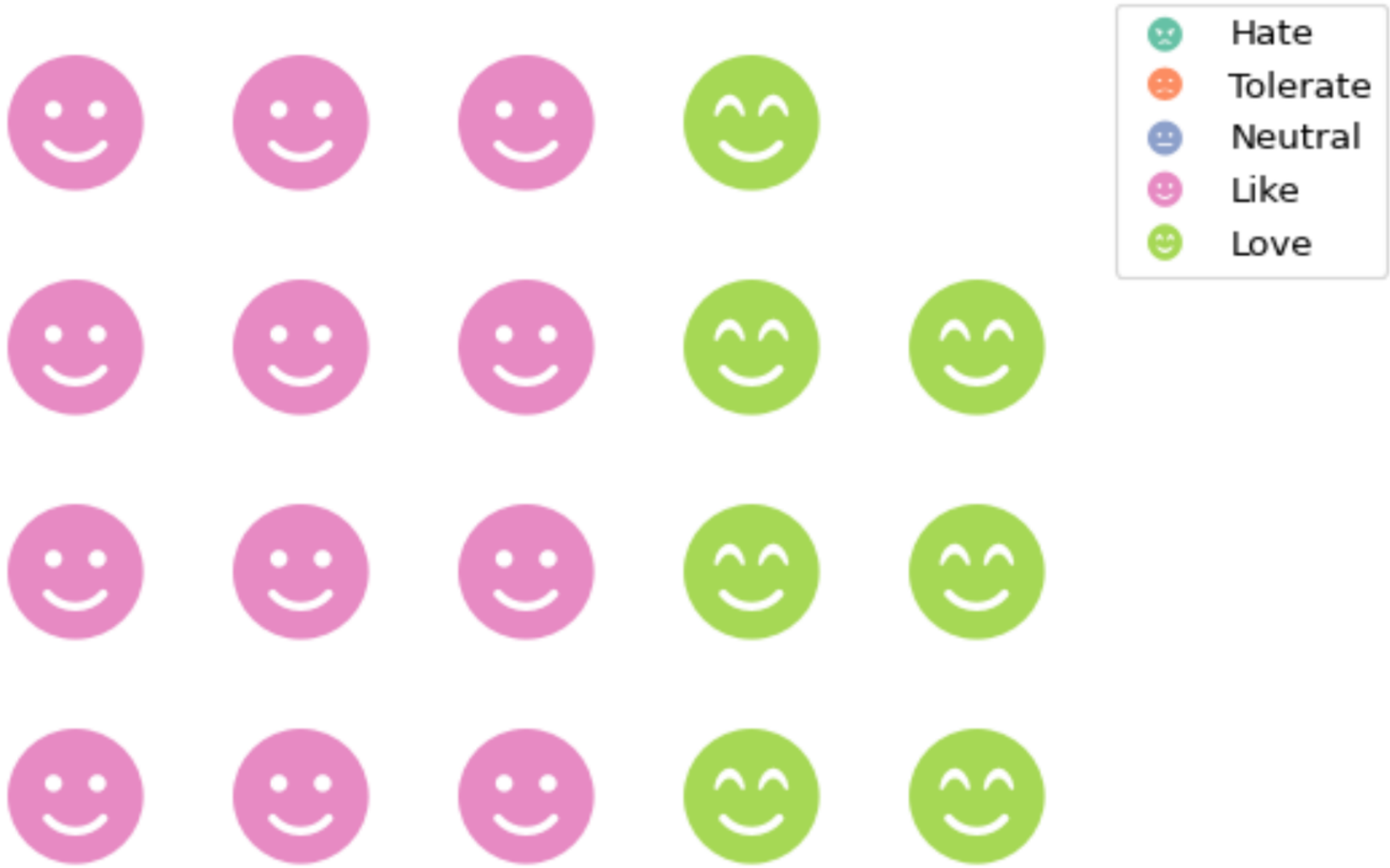
DS002.4.2:

1. Plot gallery
2. Linear algebra tricks
3. Lab: Digit Ratios
4. Homework: create a linear_algebra.py file

Plot gallery



Linear algebra tricks

A benefit of representing data as vectors is leveraging linear algebra to find patterns and relationships within the data.

Degrees	0^0	90^0	180^0
Cosine	1	0	-1

observations

1. similar vectors will have smaller angle between them i.e their orientation will be close to each other.
2. The similarity between angles in this representation is captured in the cosine of the angle between the two vectors.
3. Calculate the cosine similarity using the dot product of 2 vectors.

LAB: Digit Ratios

1. Measure two fingers
2. enter into this Google Form

homework: create a linear_algebra.py file to add to your GitHub code

It should contain these functions:

```
add()
subtract()
vector_sum()
vector_mean()
dot()
```

Refer to our textbook and use this Colab template for guidance.