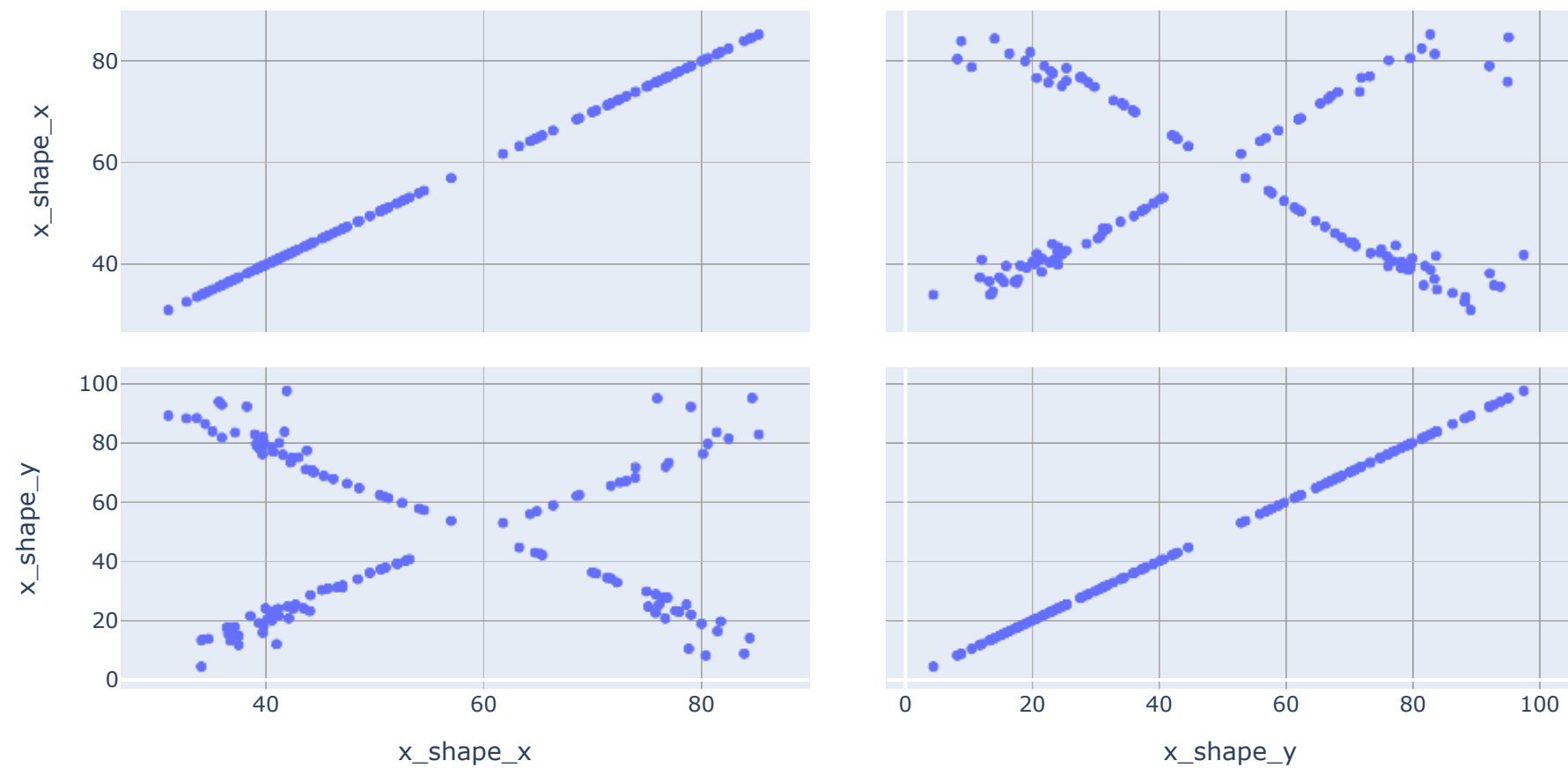


```
In [2]: import pandas as pd
import plotly.express as px
from numpy import cov
data = pd.read_csv('/Users/nivethida/Downloads/same(1).csv')

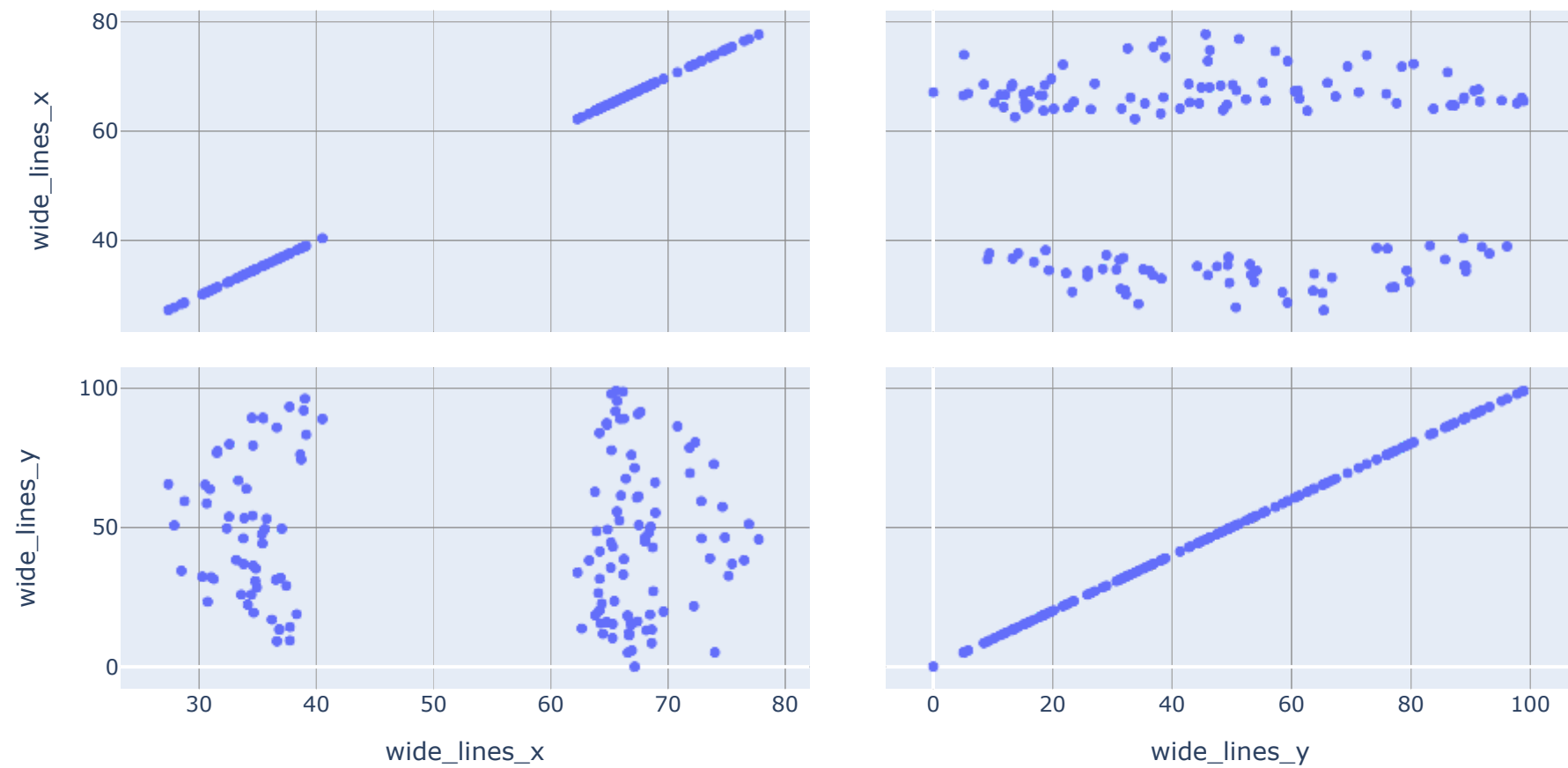
print("Corelation coefficient for x_shape_x and x_shape_y: ", cov(data['x_shape_x'], data['x_shape_y']))
columns1 = data[['x_shape_x', 'x_shape_y']]
fig = px.scatter_matrix(columns1)
fig.show()
```

Corelation coefficient for x_shape_x and x_shape_y: $\begin{bmatrix} 281.23148111 & -29.61841815 \\ -29.61841815 & 725.22499087 \end{bmatrix}$



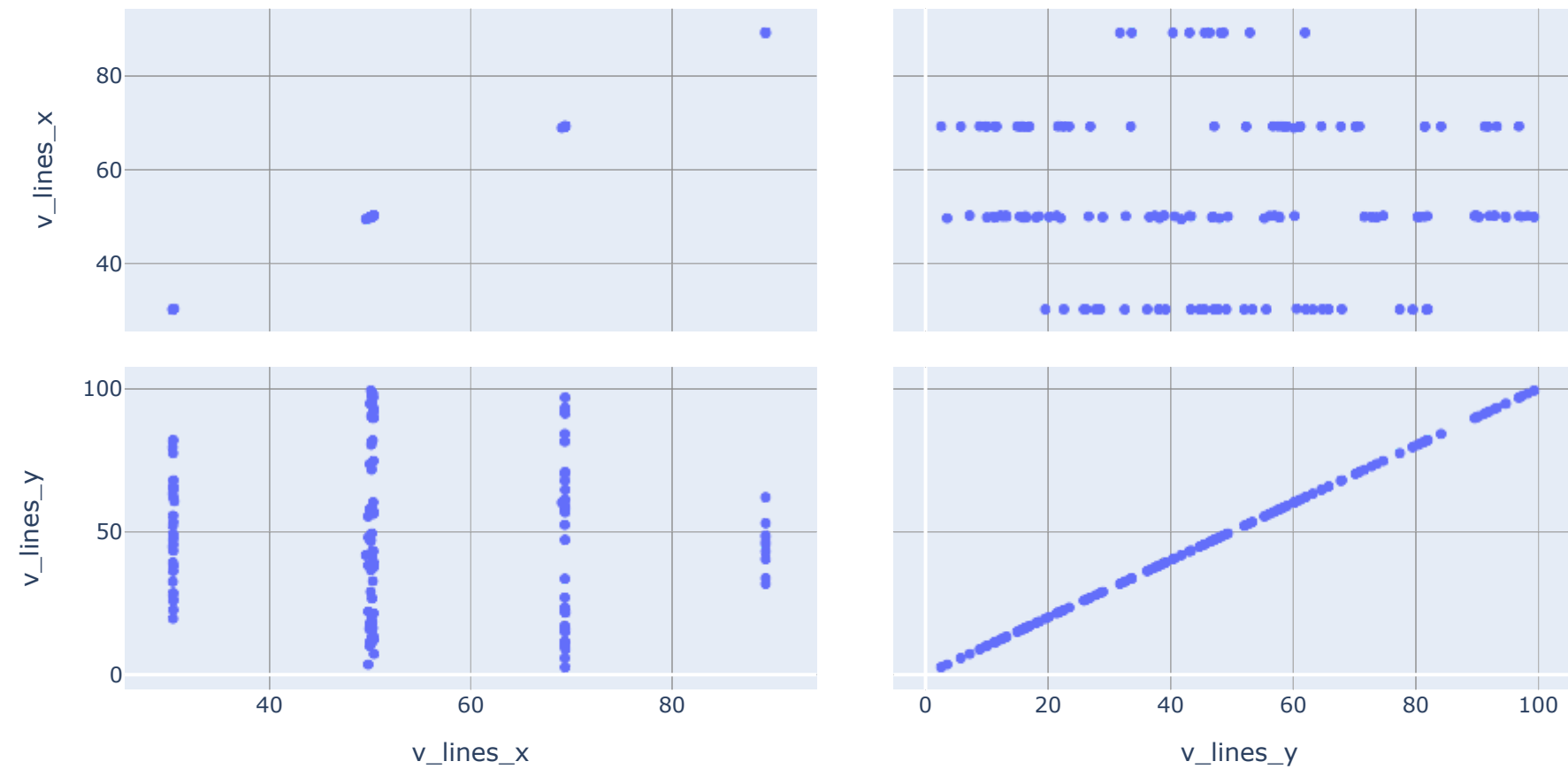
```
In [3]: print("Corelation coefficient for wide_lines_x and wide_lines_y: ", cov(data['wide_lines_x'], data['wide_lines_y']))
columns1 = data[['wide_lines_x', 'wide_lines_y']]
fig = px.scatter_matrix(columns1)
fig.show()
```

Corelation coefficient for wide_lines_x and wide_lines_y: $\begin{bmatrix} 281.23288717 & -30.07526737 \\ -30.07526737 & 725.65056027 \end{bmatrix}$



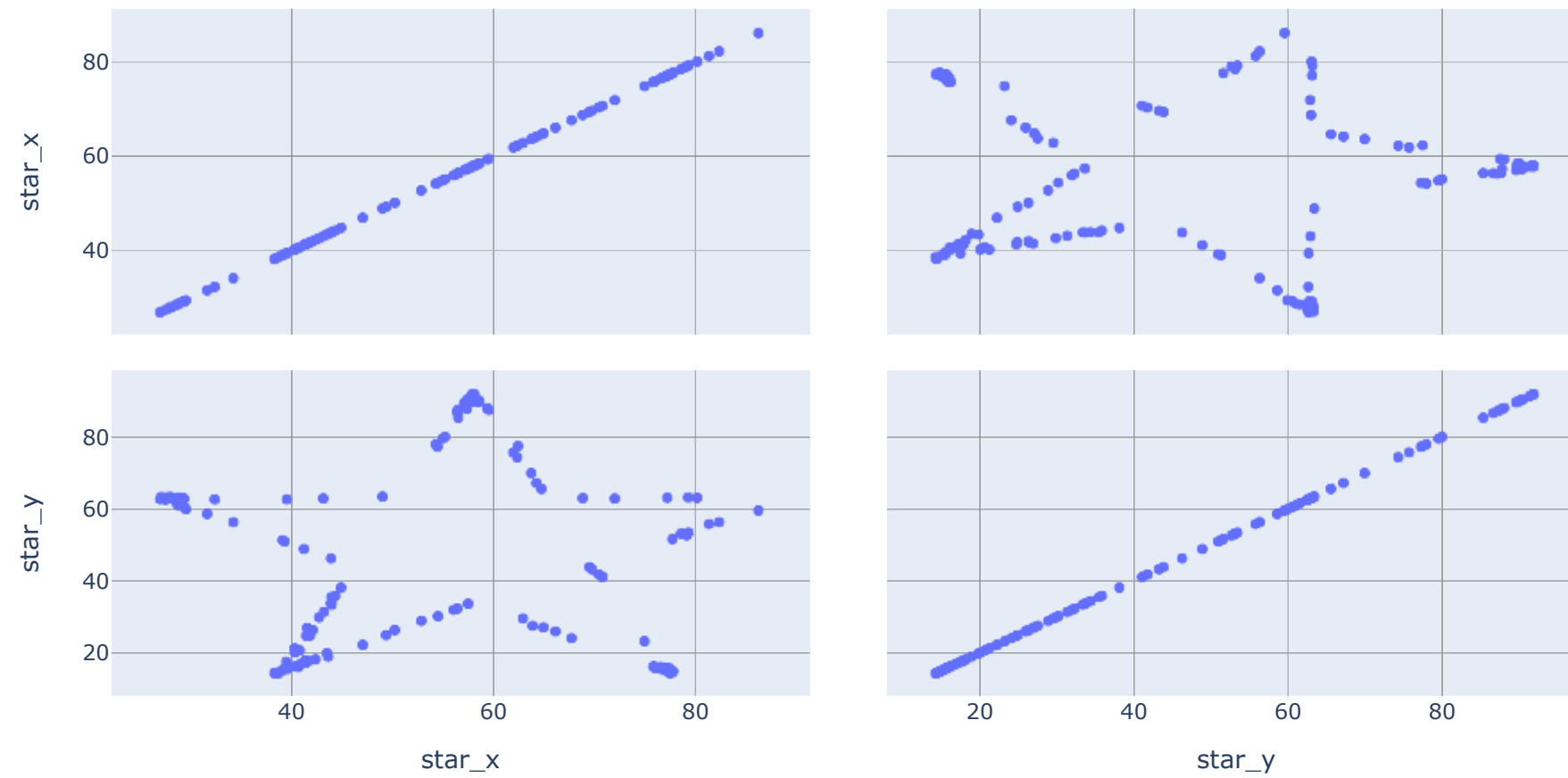
```
In [4]: print("Corelation coefficient for v_lines_x and v_lines_y: ", cov(data['v_lines_x'], data['v_lines_y']))
columns1 = data[['v_lines_x', 'v_lines_y']]
fig = px.scatter_matrix(columns1)
fig.show()
```

Corelation coefficient for v_lines_x and v_lines_y: $\begin{bmatrix} 281.23151183 & -31.37160845 \\ -31.37160845 & 725.63880888 \end{bmatrix}$



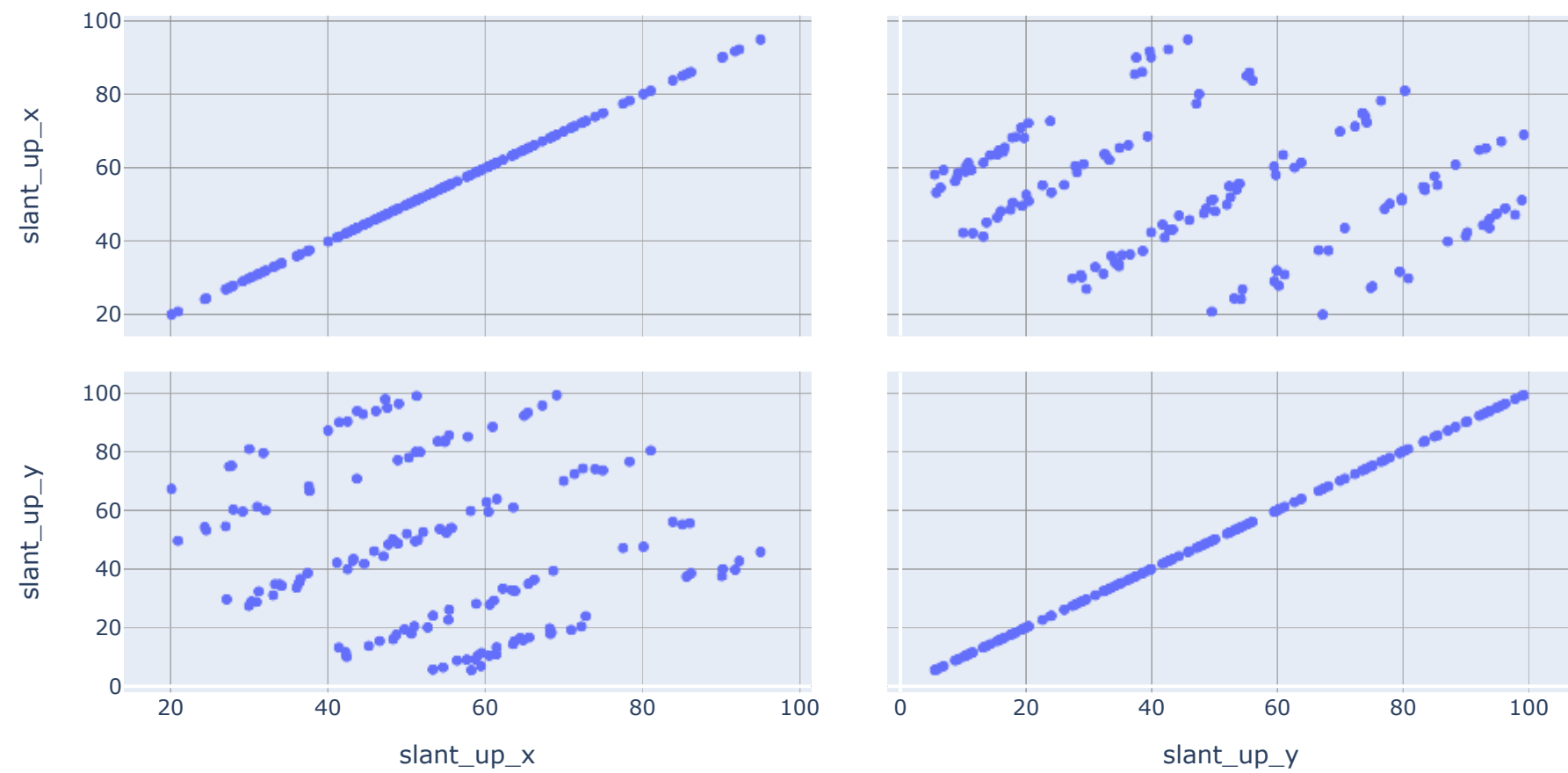
```
In [5]: print("Corelation coefficient for star_x and star_y: ", cov(data['star_x'], data['star_y']))
columns1 = data[['star_x', 'star_y']]
fig = px.scatter_matrix(columns1)
fig.show()
```

Corelation coefficient for star_x and star_y: $\begin{bmatrix} 281.19799319 & -28.43277185 \\ -28.43277185 & 725.23969478 \end{bmatrix}$



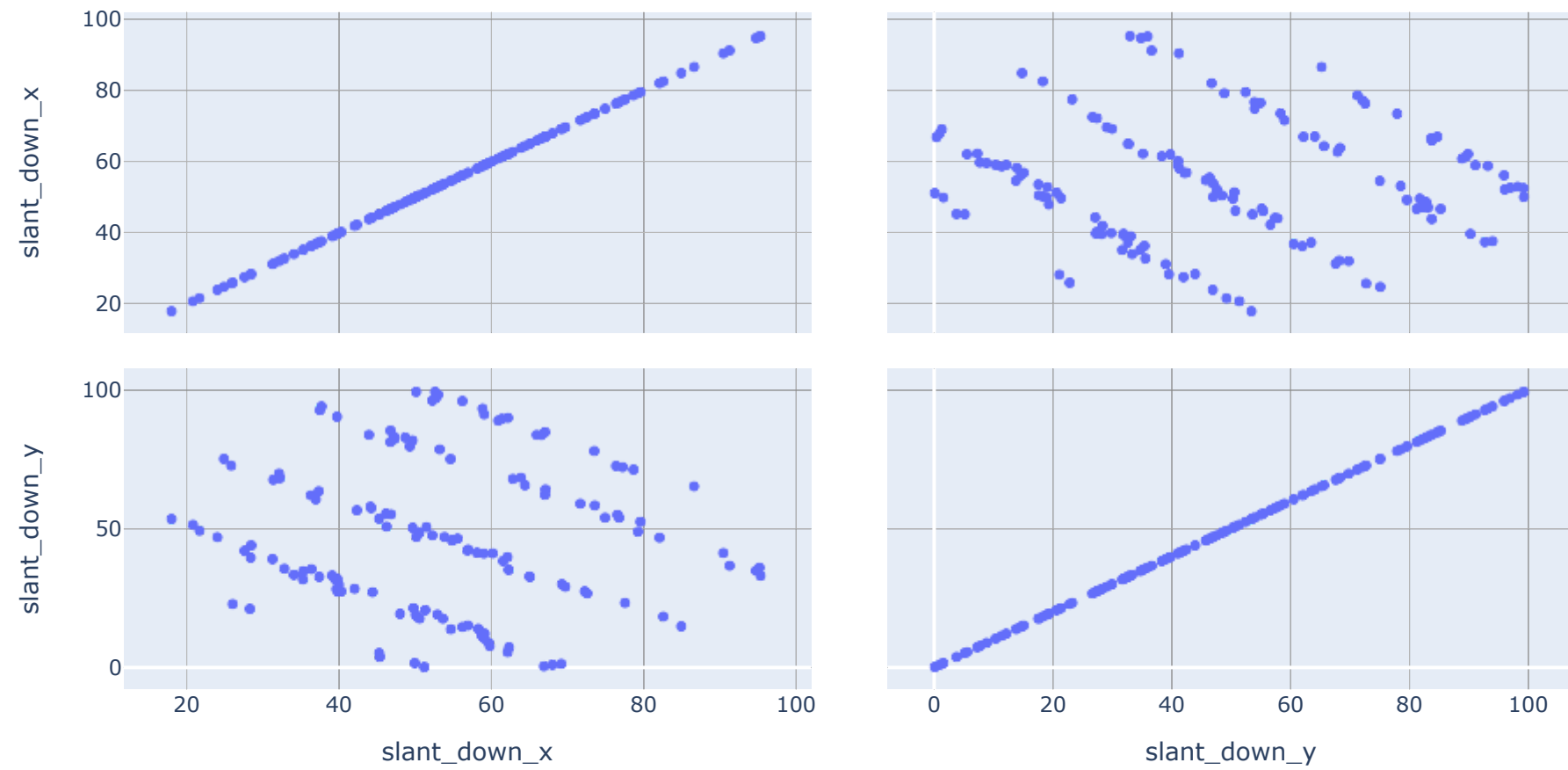
```
In [6]: print("Corelation coefficient for slant_up_x and slant_up_y: ", cov(data['slant_up_x'], data['slant_up_y']))
columns1 = data[['slant_up_x', 'slant_up_y']]
fig = px.scatter_matrix(columns1)
fig.show()
```

Corelation coefficient for slant_up_x and slant_up_y: $\begin{bmatrix} 281.1944199 & -30.99280593 \\ -30.99280593 & 725.6886048 \end{bmatrix}$



```
In [7]: print("Corelation coefficient for slant_down_x and slant_down_y: ", cov(data['slant_down_x'], data['slant_down_y']))
columns1 = data[['slant_down_x', 'slant_down_y']]
fig = px.scatter_matrix(columns1)
fig.show()
```

Corelation coefficient for slant_down_x and slant_down_y: $\begin{bmatrix} 281.12420561 & -31.15339916 \\ -31.15339916 & 725.55374889 \end{bmatrix}$



```
In [8]: print("Corelation coefficient for dots_x and dots_y: ", cov(data['dots_x'], data['dots_y']))
columns1 = data[['dots_x', 'dots_y']]
fig = px.scatter_matrix(columns1)
fig.show()
```

Corelation coefficient for dots_x and dots_y: $\begin{bmatrix} 281.15695341 & -27.24768066 \\ -27.24768066 & 725.23521522 \end{bmatrix}$

