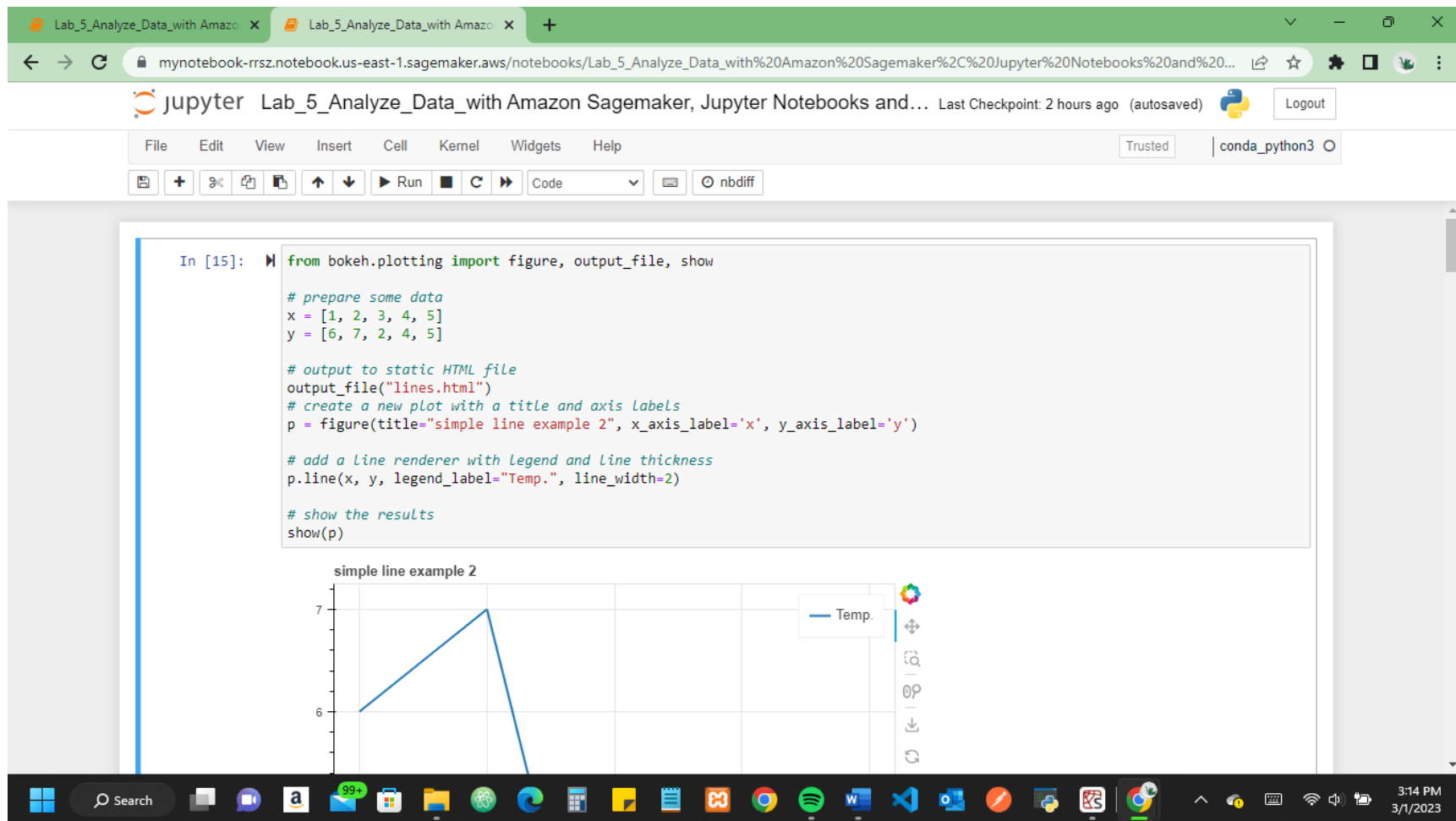
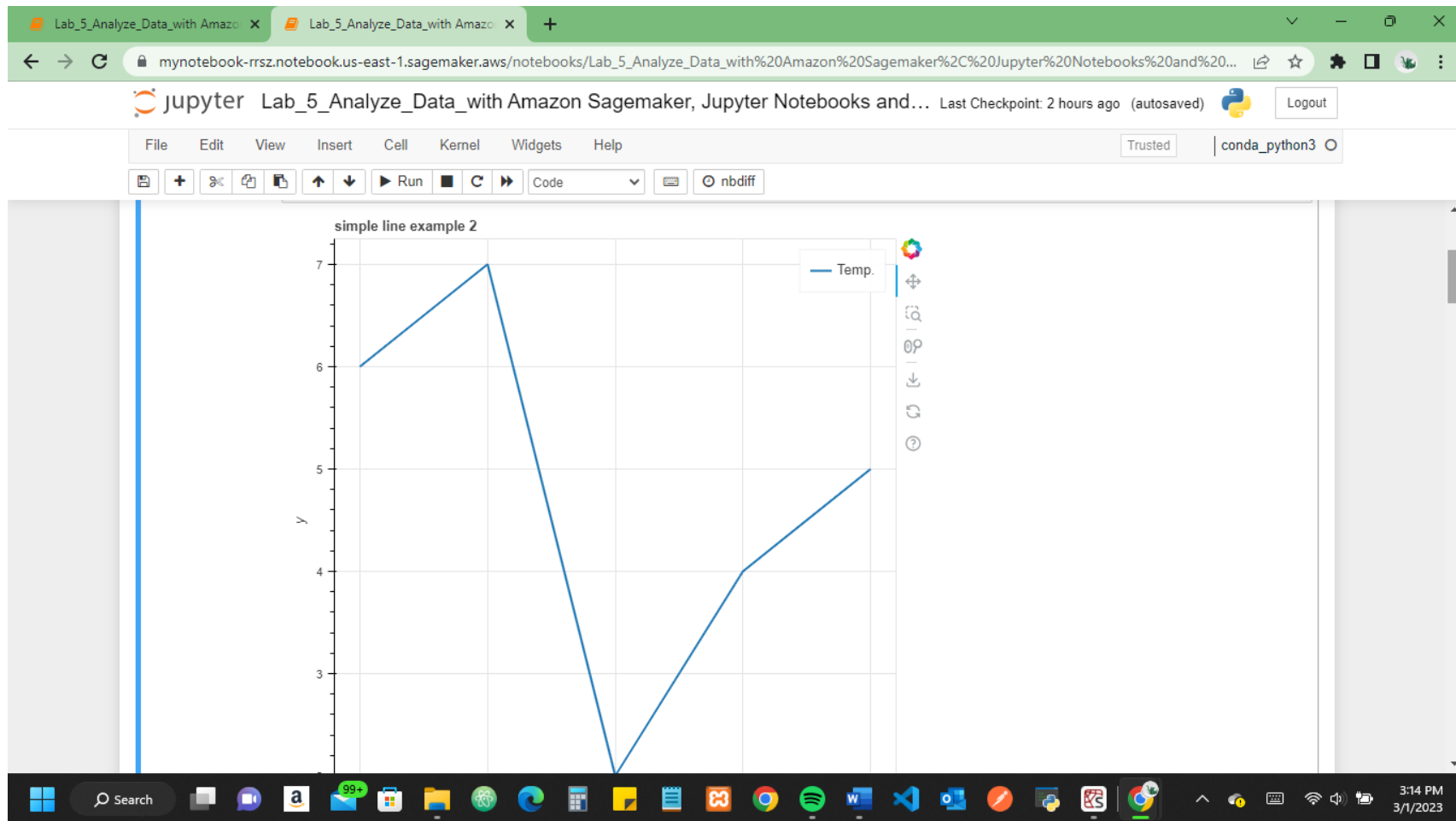


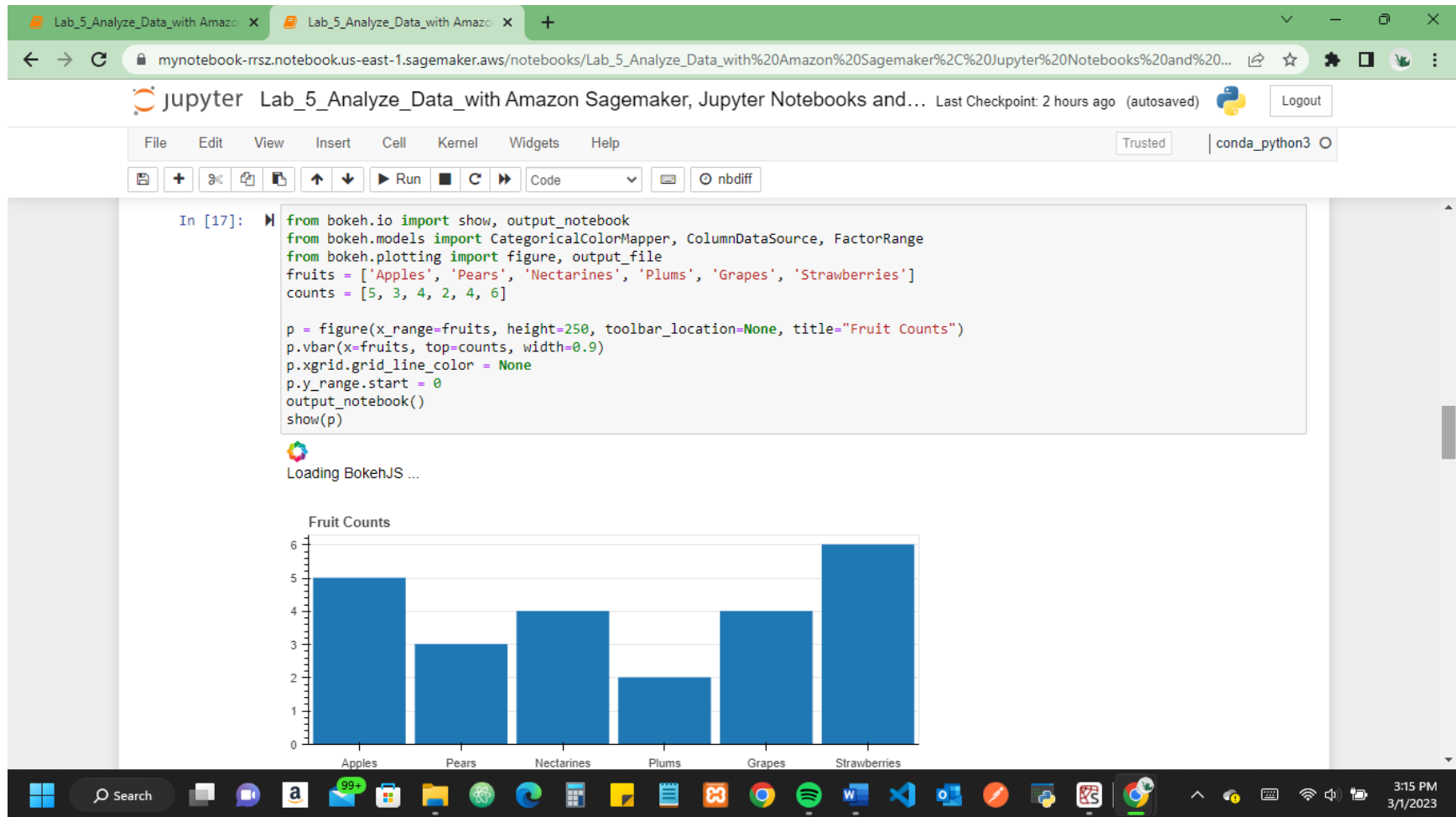
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Lab_5_Analyze_Data_with Amazon Sagemaker, Jupyter Notebooks and... Last Checkpoint: 2 hours ago (autosaved) Logout

File Edit View Insert Cell Kernel Widgets Help Notebook saved Trusted conda_python3

```
In [21]: from bokeh.transform import factor_cmap

fruits = ['Apples', 'Pears', 'Nectarines', 'Plums', 'Grapes', 'Strawberries']
years = ['2015', '2016', '2017']

data = {'fruits' : fruits,
        '2015'   : [2, 1, 4, 3, 2, 4],
        '2016'   : [5, 3, 3, 2, 4, 6],
        '2017'   : [3, 2, 4, 4, 5, 3]}

# this creates [ ("Apples", "2015"), ("Apples", "2016"), ("Apples", "2017"), ("Pears", "2015), ... ]
x = [ (fruit, year) for fruit in fruits for year in years ]
counts = sum(zip(data['2015'], data['2016'], data['2017']), ()) # Like an hstack

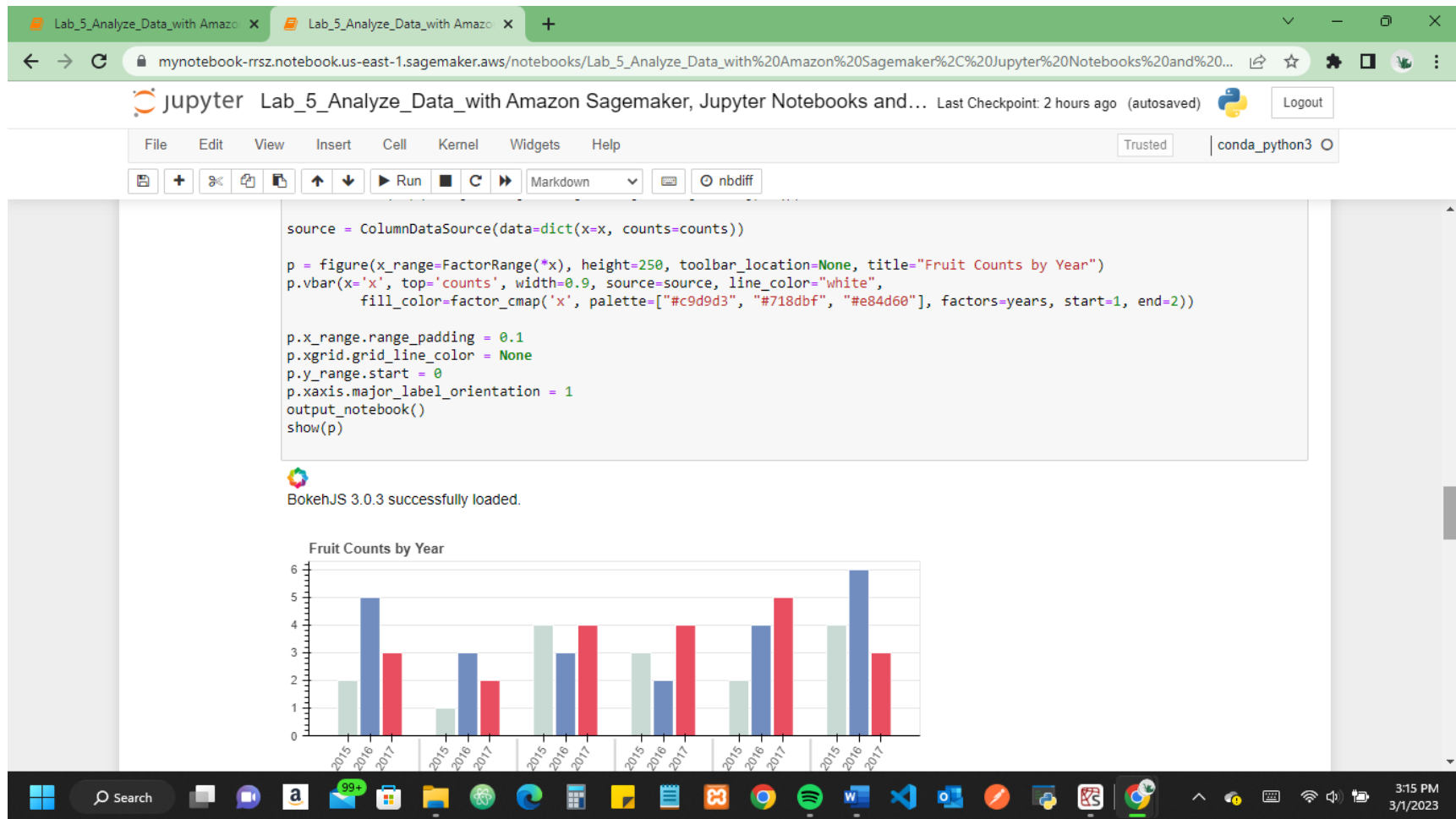
source = ColumnDataSource(data=dict(x=x, counts=counts))

p = figure(x_range=FactorRange(*x), height=250, toolbar_location=None, title="Fruit Counts by Year")
p.vbar(x='x', top='counts', width=0.9, source=source, line_color="white",
        fill_color=factor_cmap('x', palette=["#c9d9d3", "#718dbf", "#e84d60"], factors=years, start=1, end=2))

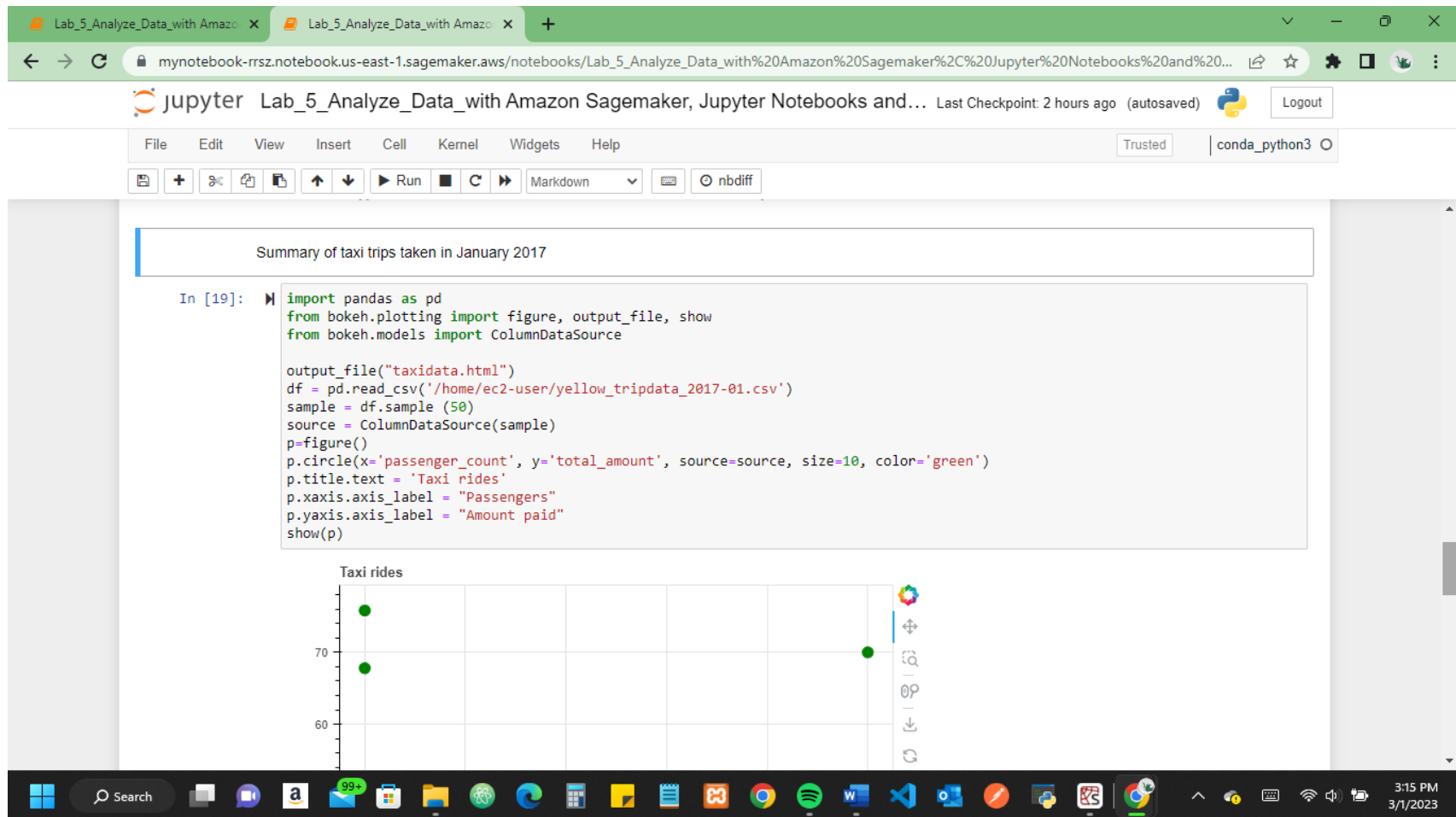
p.x_range.range_padding = 0.1
p.xgrid.grid_line_color = None
p.y_range.start = 0
p.xaxis.major_label_orientation = 1
output_notebook()
show(p)
```

BokehJS 3.0.3 successfully loaded.

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