File Edit View Run Kernel Tabs Settings Help

composing_masterpiece

Code

Python 3

Composing Masterpieces

You've been offered the opportunity to interview with REMAX, an international real estate company. The interview is for a Data Analyst role, which requires both development and visualization skills. All applicants are required to present a portfolio upon interview. You currently do not have a portfolio, so use the provided state loan data to come up with some snazzy visualizations to showcase in the interview.

[1]:
```
import pandas as pd
import hvplot.pandas
from pathlib import Path
```

Prep the data

[2]:
```
# Read in loan data
loan_data = pd.read_csv(Path("../Resources/state_loan_data.csv"))

# Group data by state for state-level analysis
loan_data = loan_data.groupby('State Code').sum()
loan_data.head()
```

[2]:

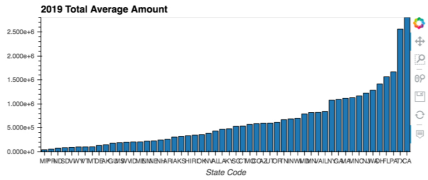
State Code	Total Active Loans	Total Average Loan Amount	2015 - 2016	2010 - 2014	Self Help Loan	Leveraged Loan
AK	897	148811.39	189583.49	172371.39	96	450
AL	7455	435054.53	686066.79	648663.44	18	605
AR	6186	263212.27	355445.70	351562.42	861	567
AZ	3982	597591.94	507532.91	599688.64	1718	1057
CA	8875	2805653.85	3008866.40	2881741.23	4134	2231

Plot Total Average Loan Amount

[3]:
```
# Slice for Total Average Loan Amount
loan_data_state = loan_data['Total Average Loan Amount']
loan_data_avg_grp = loan_data_state.sort_values()

# Plot Total Average Loan Amount
plot_state_avgs = loan_data_avg_grp.hvplot.bar(label='2019 Total Average Amount')
plot_state_avgs
```

[3]:



Plot Total Average Loan Amount for 2015 - 2016 and 2010 - 2014

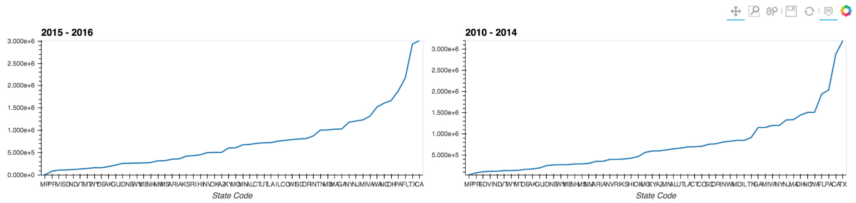
[4]:
```
# Slice data for Total Average Loan Amount by 2015-2016 and 2010-2014 date ranges
loan_data_range_1 = loan_data['2015 - 2016']
loan_data_range_2 = loan_data['2010 - 2014']
loan_data_range_grp = loan_data_range_1.sort_values()
loan_data_range_grp_2 = loan_data_range_2.sort_values()

# Plot data for date ranges
plot_2015_2016 = loan_data_range_grp.hvplot(label='2015 - 2016')
plot_2010_2014 = loan_data_range_grp_2.hvplot(label='2010 - 2014')
```

Compose plots for 2015 - 2016 and 2010 - 2014 using + operator

[5]:
```
# Compose plots
plot_2015_2016 + plot_2010_2014
```

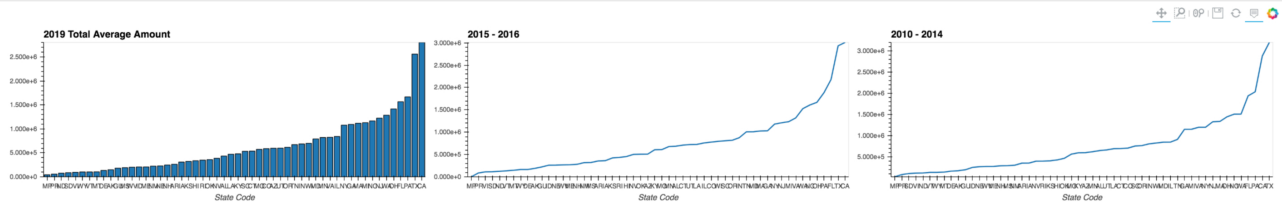
[5]:



Compose plots for state averages, 2015 - 2016, and 2010 2014 using + operator

[6]:
```
# Compose plots
plot_state_avgs + plot_2015_2016 + plot_2010_2014
```

[6]:



Compose plots for state averages, 2015 - 2016, and 2010 2014 using * operator

[7]:
```
# Overlay plots
plot_state_avgs * plot_2015_2016 * plot_2010_2014
```

[7]: