Fort Collins Traffic Data

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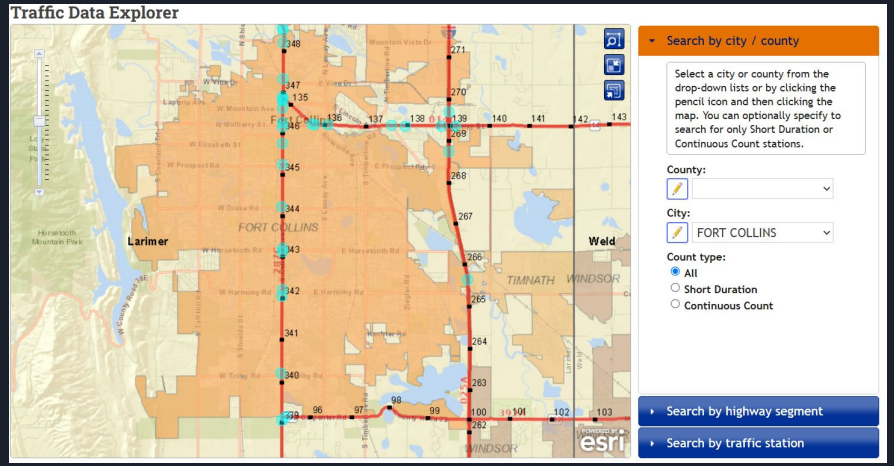
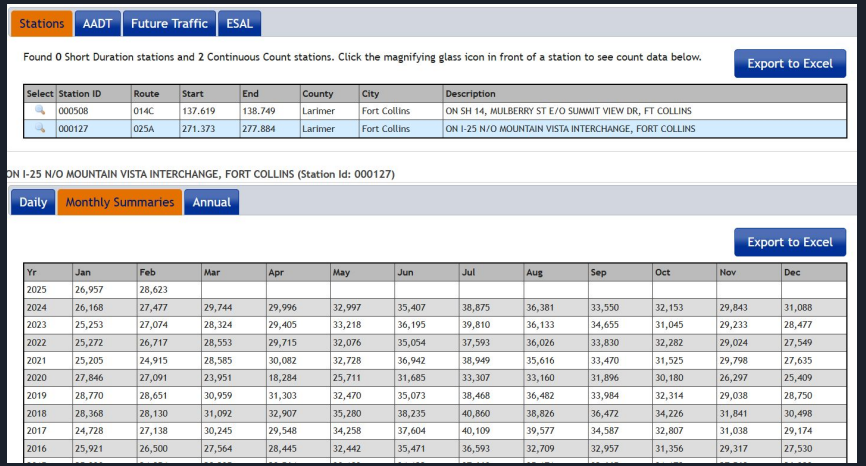
Meta Information about the data.

Online Transportation and Information Data is an online database with information from the Colorado Department of Transportation.

The data is collected from “traffic stations” across the state where the amount of cars that travel through the “station” is measured.





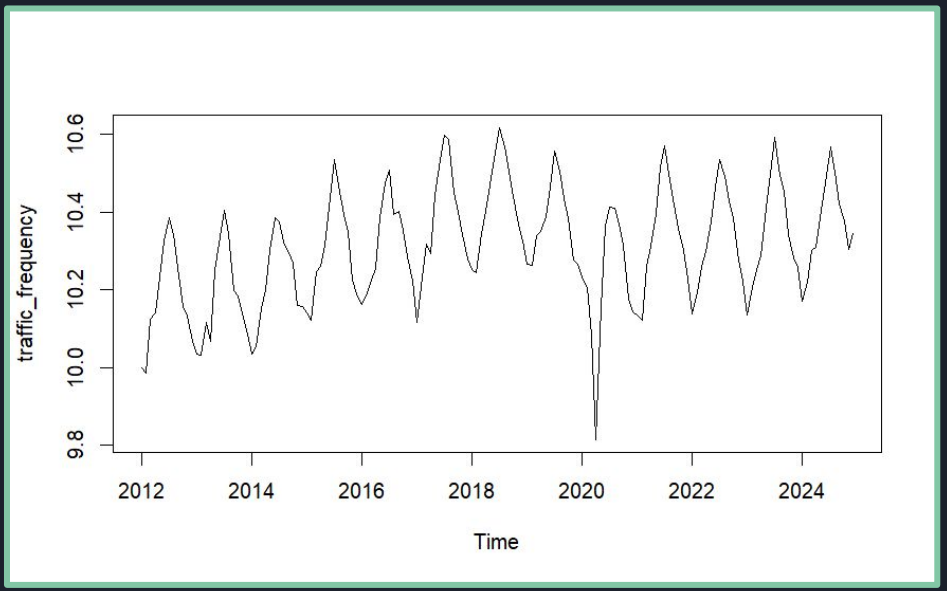
Note: the CDOT does not state what the traffic stations are but our best guess is the traffic cameras on lights

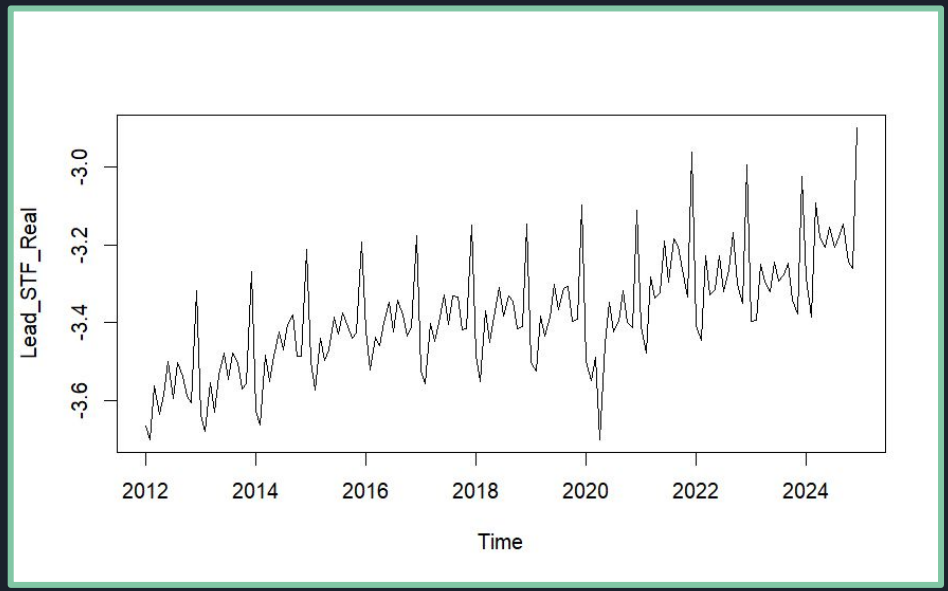
Why we considered this data

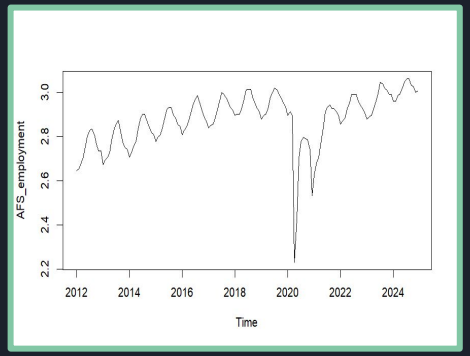
This data is typically used for transportation planning and project development, however we believe that this data can help determine “foot traffic” in fort collins which could be used to determine the amount of consumers traveling through

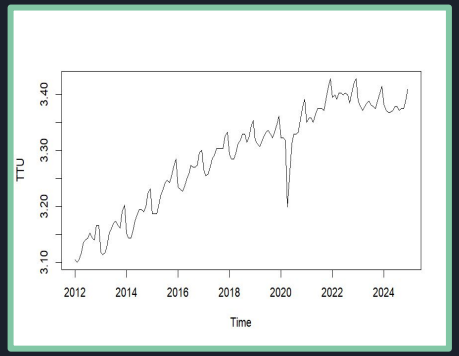
Even if the data doesn't perfectly correlate with the sales in the city this data could also help determine the general economic welfare of a city, more cars traveling through could mean: more jobs, more travel, more growth, etc.

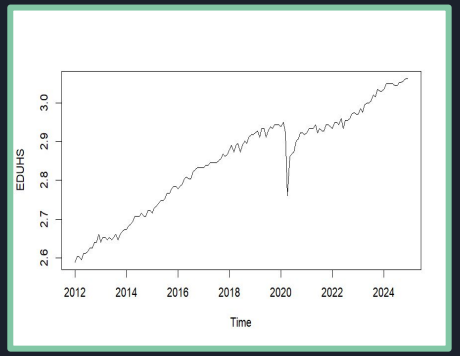
Plotted Data

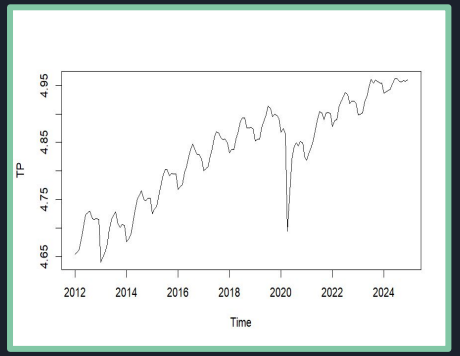


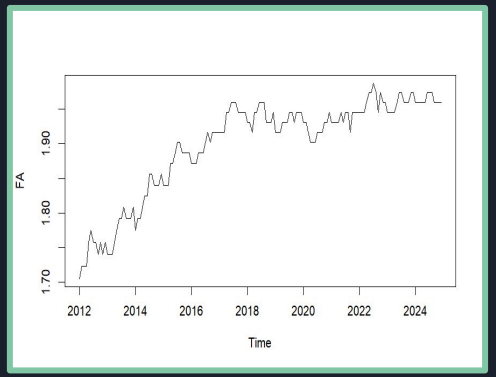


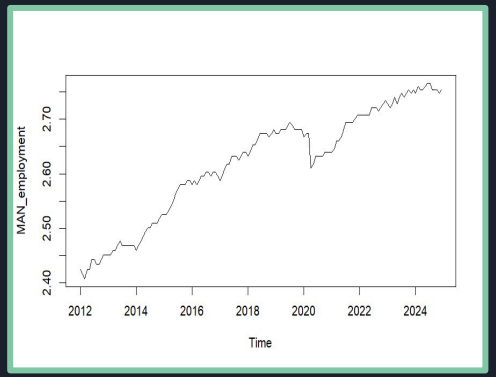

AFS_employment
2.2
2.4
2.6
2.8
3.0
2012
2014
2016
2018
2020
2022
2024
Time

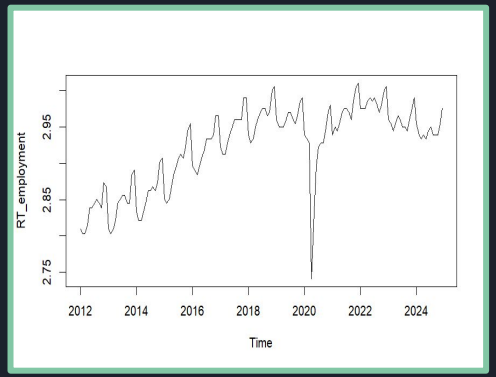

TTU
3.10
3.20
3.30
3.40
2012
2014
2016
2018
2020
2022
2024
Time


EDUHS
2.6
2.7
2.8
2.9
3.0
2012
2014
2016
2018
2020
2022
2024
Time


TP
4.65
4.75
4.85
4.95
2012
2014
2016
2018
2020
2022
2024
Time


FA
1.70
1.80
1.90
2012
2014
2016
2018
2020
2022
2024
Time


MAN_employment
2.40
2.50
2.60
2.70
2012
2014
2016
2018
2020
2022
2024
Time


RT_employment
2.75
2.85
2.95
2012
2014
2016
2018
2020
2022
2024
Time

Johansen Procedure

Values of teststatistic and critical values of test:

	test	10pct	5pct	1pct
r <= 8	1.40	6.50	8.18	11.65
r <= 7	8.81	12.91	14.90	19.19
r <= 6	19.93	18.90	21.07	25.75
r <= 5	32.15	24.78	27.14	32.14
r <= 4	75.33	30.84	33.32	38.78
r <= 3	89.60	36.25	39.43	44.59
r <= 2	119.26	42.06	44.91	51.30
r <= 1	147.62	48.43	51.07	57.07
r = 0	209.13	54.01	57.00	63.37

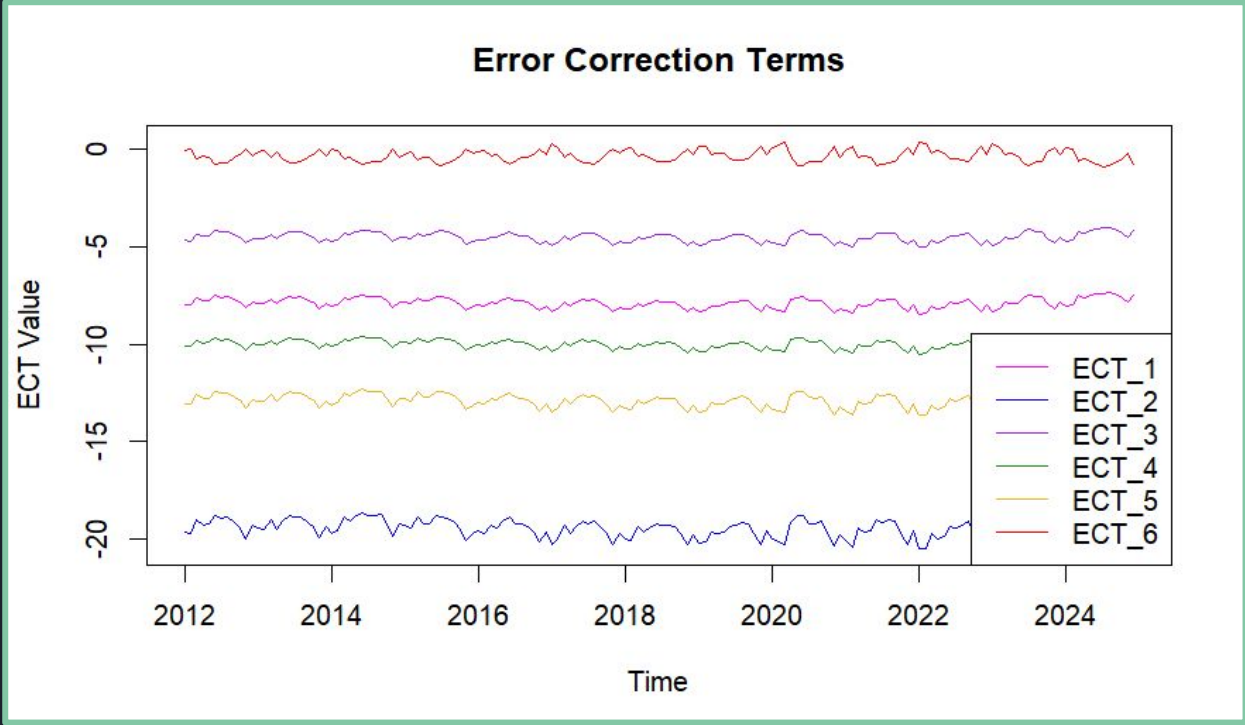
Coefficients

	[,1]	[,2]	[,3]	[,4]	[,5]	[,6]
TP.l12	1.000	0.000	0.000	0.000	0.000	0.000
EDUHS.l12	0.000	1.000	0.000	0.000	0.000	0.000
TTU.l12	0.000	0.000	1.000	0.000	0.000	0.000
FA.l12	0.000	0.000	0.000	1.000	0.000	0.000
MAN_employment.l12	0.000	0.000	0.000	0.000	1.000	0.000
AFS_employment.l12	0.000	0.000	0.000	0.000	0.000	1.000
RT_employment.l12	-7.208	-13.366	-6.671	-6.516	-9.801	5.351
traffic_frequency.l12	1.231	2.497	1.472	1.099	1.867	-2.321
Lead_STF_Real.l12	1.293	2.652	1.038	1.240	1.813	-1.502

Dickey-Fuller

ECT_1	ECT_2	ECT_3	ECT_4	ECT_5	ECT_6
0.01	0.01	0.01	0.01	0.01	0.01

```
Warning: p-value smaller than printed p-value
        Augmented Dickey-Fuller Test

data:  ECT_df[[vec]]
Dickey-Fuller = -4.2946, Lag order = 5, p-value = 0.01
alternative hypothesis: stationary

Warning: p-value smaller than printed p-value
        Augmented Dickey-Fuller Test

data:  ECT_df[[vec]]
Dickey-Fuller = -4.4613, Lag order = 5, p-value = 0.01
alternative hypothesis: stationary

Warning: p-value smaller than printed p-value
        Augmented Dickey-Fuller Test

data:  ECT_df[[vec]]
Dickey-Fuller = -5.3352, Lag order = 5, p-value = 0.01
alternative hypothesis: stationary

Warning: p-value smaller than printed p-value
        Augmented Dickey-Fuller Test

data:  ECT_df[[vec]]
Dickey-Fuller = -4.6844, Lag order = 5, p-value = 0.01
alternative hypothesis: stationary

Warning: p-value smaller than printed p-value
        Augmented Dickey-Fuller Test

data:  ECT_df[[vec]]
Dickey-Fuller = -4.6124, Lag order = 5, p-value = 0.01
alternative hypothesis: stationary

Warning: p-value smaller than printed p-value
        Augmented Dickey-Fuller Test

data:  ECT_df[[vec]]
Dickey-Fuller = -8.067, Lag order = 5, p-value = 0.01
alternative hypothesis: stationary
```



Findings

According to all of the information previously discussed we can see evidence if favor of cointegration between the data.