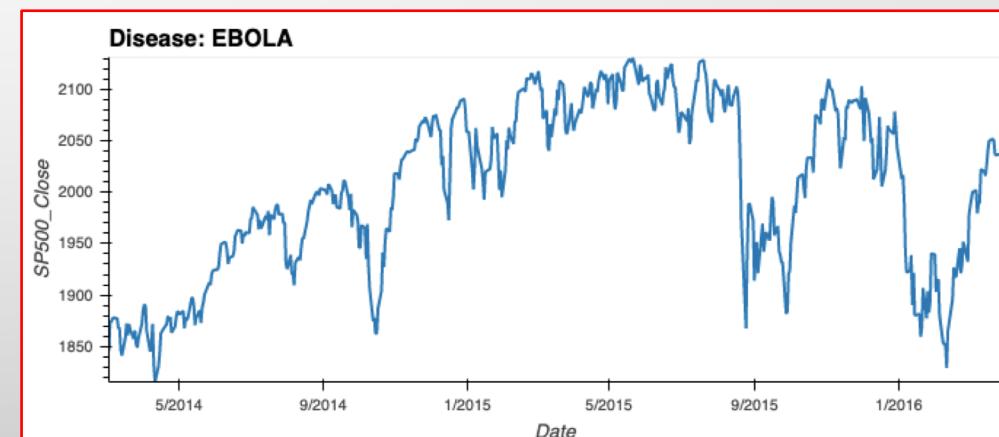
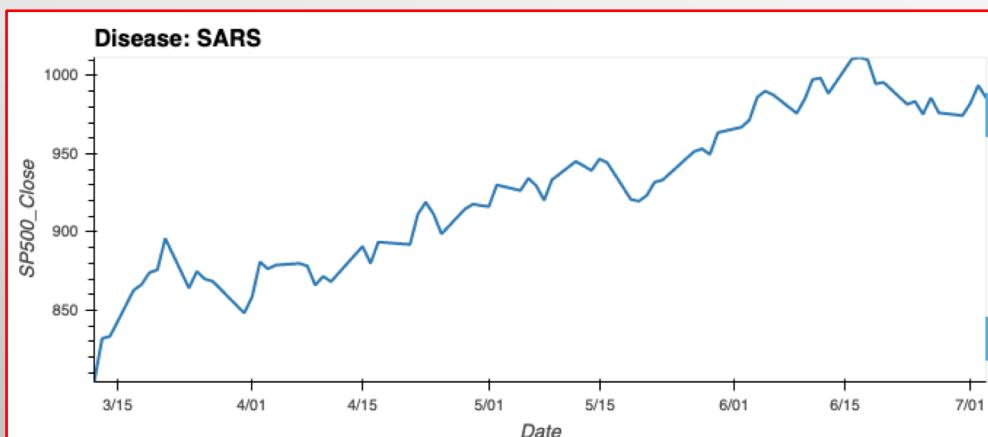
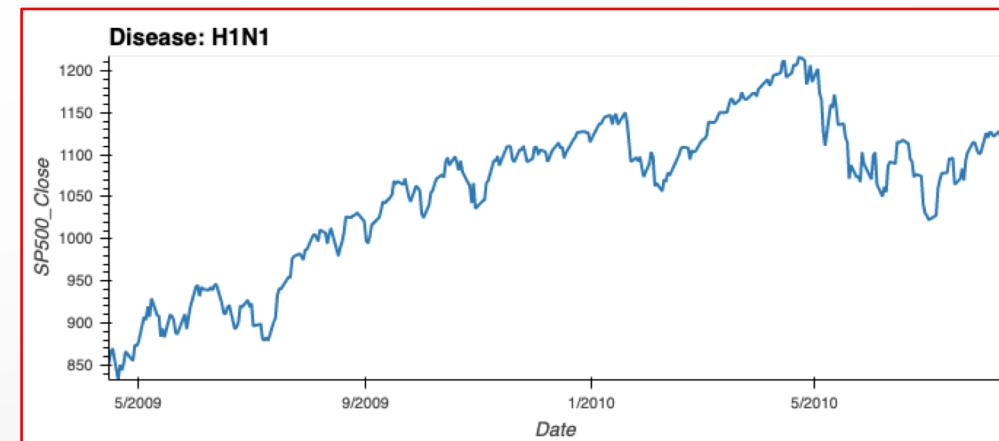
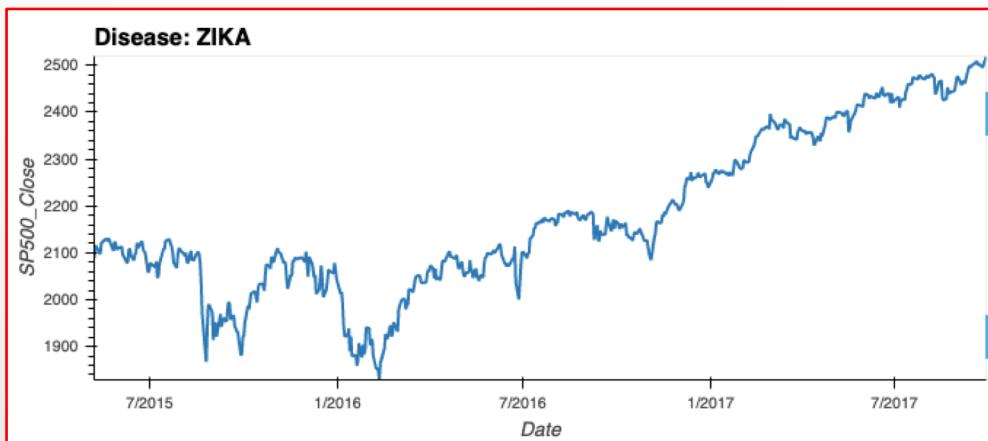


# VISUALIZATIONS

ZIKA, H1N1, SARS, EBOLA

# SPY (S&P500)



# SPY\_SECTORS

XLY: Consumer Discretionary

XLF: Financials

XLB: MAterials

XLP: Consumer Staples

XLV: Health Care

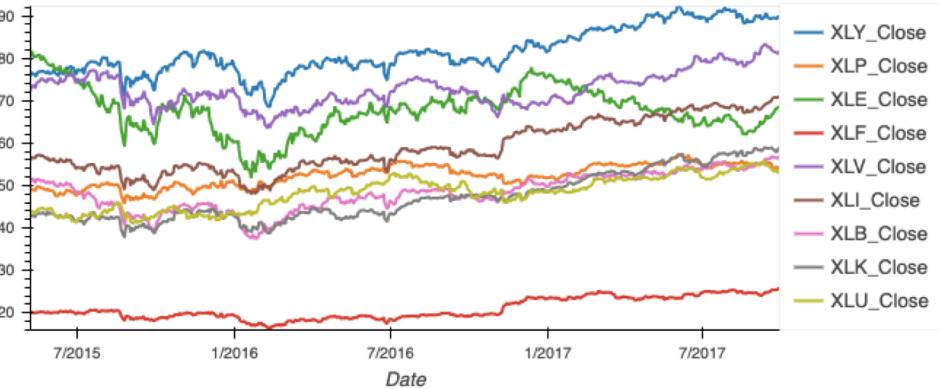
XLK: Technology

XLE: Energy

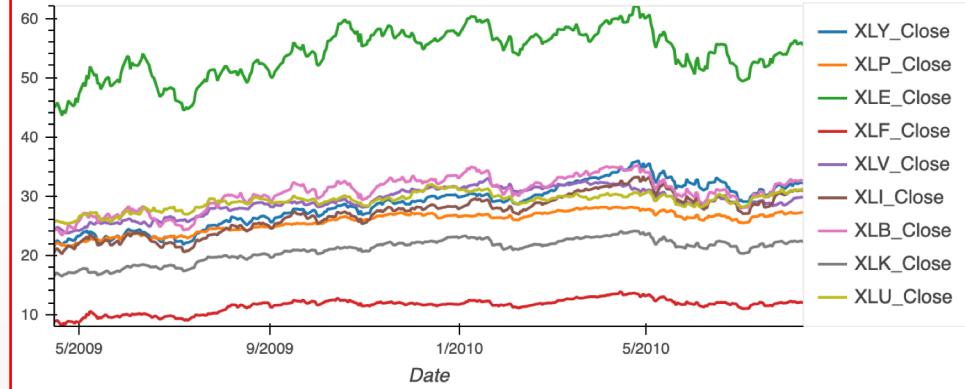
XLI: Industrials

XLU: Utilities

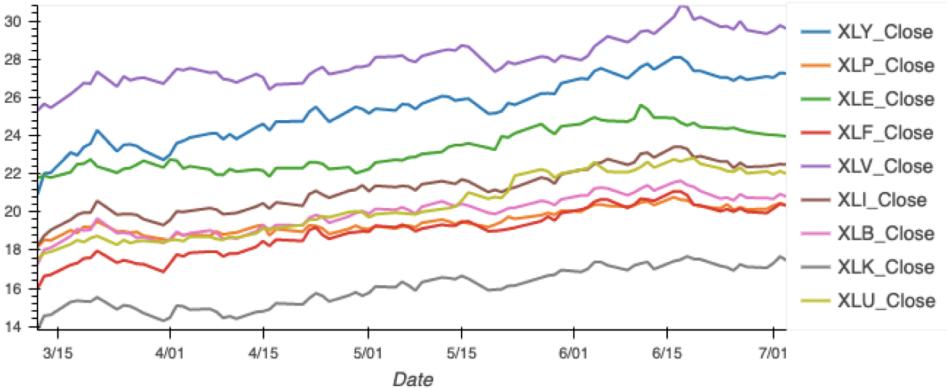
Disease: ZIKA



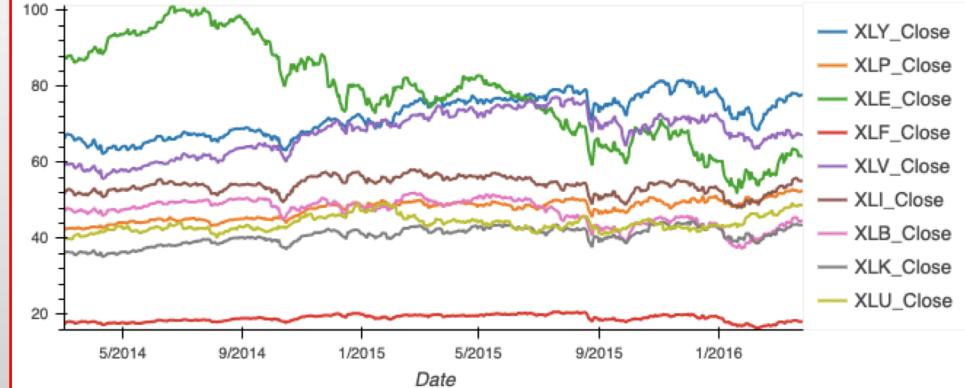
Disease: H1N1



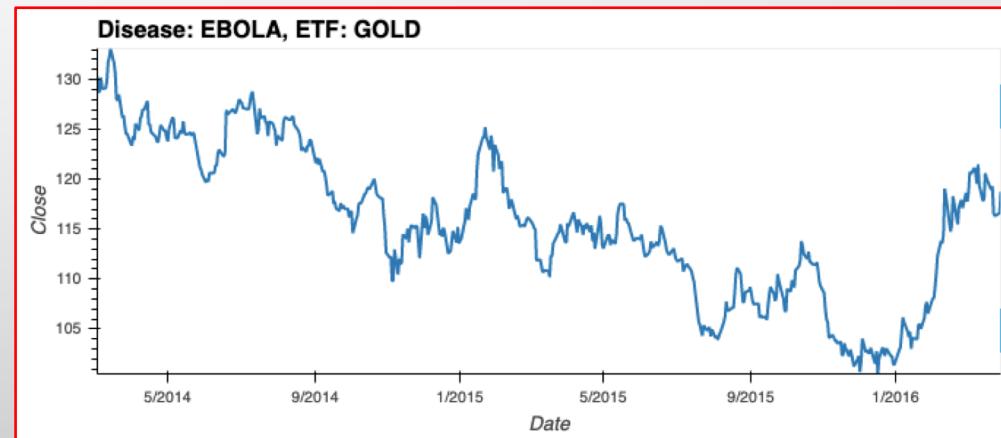
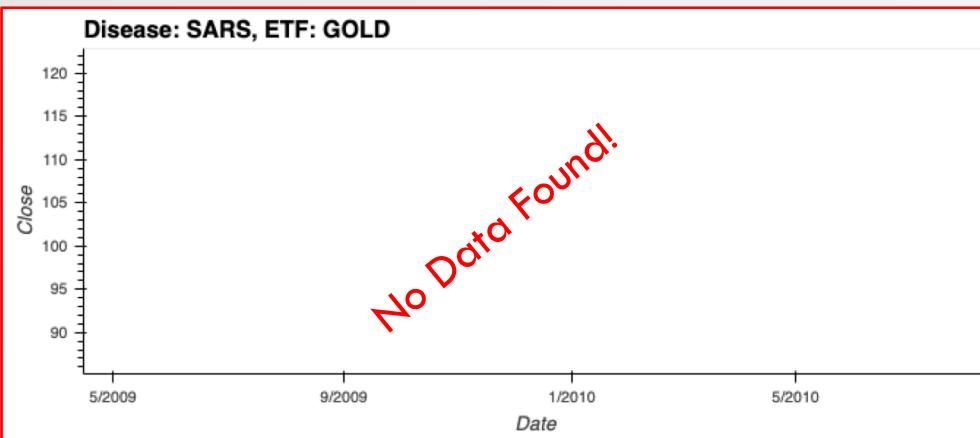
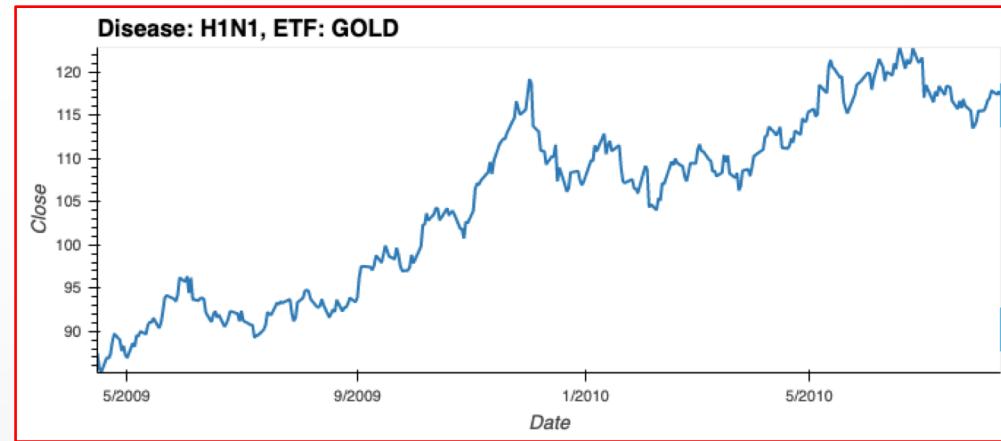
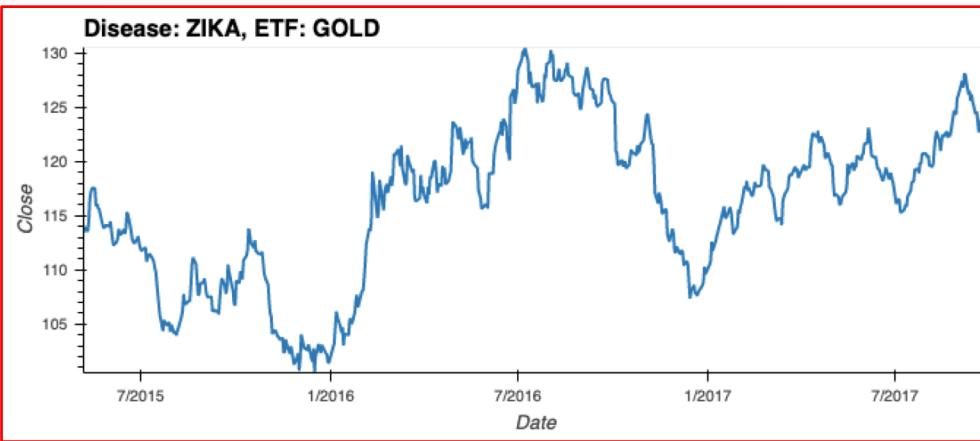
Disease: SARS



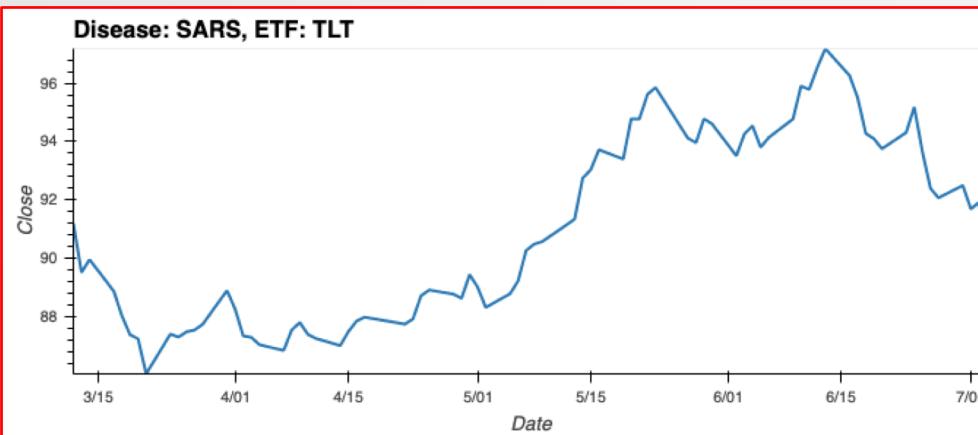
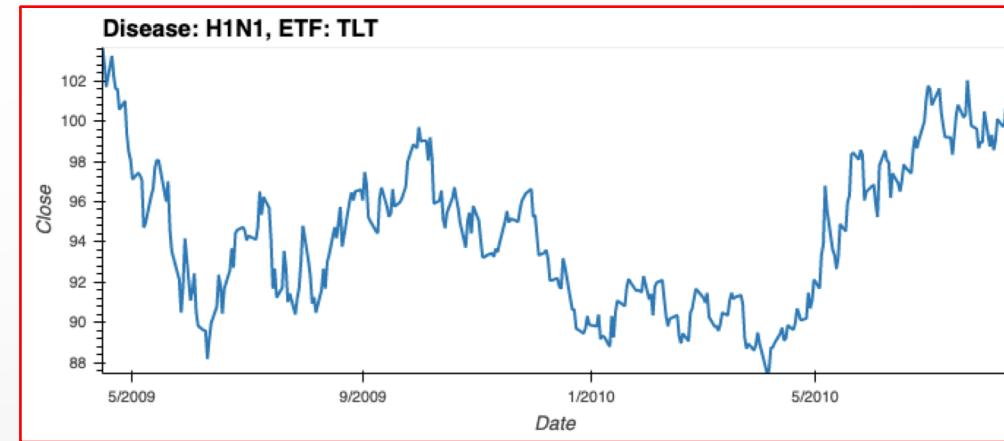
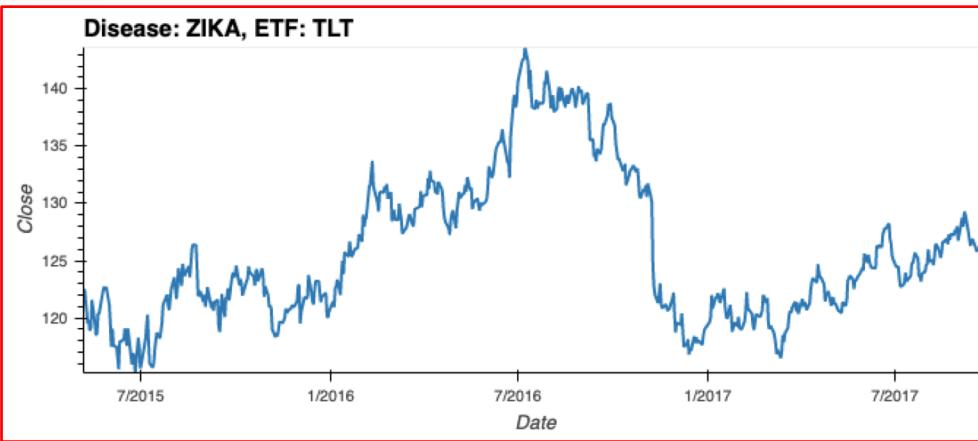
Disease: EBOLA



# GOLD (GOLD ETF)



# TLT (T-BONDS ETF)



# VOLATILITY INDEX (TAILOR MADE – STEP 1)

GOLD Tranches		TLT Tranches		SPY/Sectors Tranches															
		Close	Volume	SP500_Close	SP500_Volume	XLY_Close	XLY_Volume	XLP_Close	XLP_Volume	XLE_Close	XLE_Volume	XLF_Close	XLF_Volume	XLV_Close	XLV_Volume	XLI_Close	XLI_Volume		
Disease	min/max/mean			Disease	min/max/mean														
ZIKA	min	0.000000	0.000384	ZIKA	min	0.000000	0.000849	ZIKA	min	0.000000	0.000268	XLY	Close	XLY	Volume	XLP	Close		
	max	0.049038	4.578831	ZIKA	max	0.042432	3.261861	ZIKA	max	0.039414	197.072109	XLY	0.039941	XLP	0.000287	XLE	0.000129	XLF	0.000122
	mean	0.006463	0.424195	ZIKA	mean	0.006232	0.336188	ZIKA	mean	0.005424	0.588873	XLY	0.006278	XLP	0.034794	XLE	0.000542	XLF	0.000724
H1N1	min	0.000000	0.004650	H1N1	min	0.000000	0.002124	H1N1	min	0.000043	0.000004	XLY	0.002006	XLP	0.000000	XLE	0.000630	XLF	0.000000
	max	0.041702	2.705102	H1N1	max	0.032707	3.363390	H1N1	max	0.043974	3.212649	XLY	0.052206	XLP	0.029638	XLE	0.010469	XLF	0.040469
	mean	0.008454	0.356125	H1N1	mean	0.007868	0.348063	H1N1	mean	0.009246	0.185479	XLY	0.011144	XLP	0.034794	XLE	0.0268101	XLF	0.0344343
EBOLA	min	0.000000	0.000137	SARS	min	0.000106	0.001298	SARS	min	0.000676	0.001780	XLY	0.000000	XLP	0.001025	XLE	0.000527	XLF	0.012976
	max	0.040189	4.296912	SARS	max	0.018421	7.442777	SARS	max	0.035427	0.752583	XLY	0.053110	XLP	0.028633	XLE	0.090327	XLF	0.029665
	mean	0.007035	0.466491	EBOLA	mean	0.006336	0.778884	EBOLA	mean	0.009463	0.110712	XLY	0.011346	XLP	0.008443	XLE	0.007947	XLF	0.015422
EBOLA	min	0.000000	0.000017	EBOLA	min	0.000005	0.000642	EBOLA	min	0.039414	197.072109	XLY	0.000000	XLP	0.000287	XLE	0.000000	XLF	0.000000
	max	0.027183	2.314681	EBOLA	max	0.027183	2.314681	EBOLA	max	0.043974	197.072109	XLY	0.039941	XLP	0.034794	XLE	0.064244	XLF	0.040469
	mean	0.006837	0.343920	EBOLA	mean	0.006837	0.343920	EBOLA	mean	0.006558	0.554056	XLY	0.007444	XLP	0.0417676	XLE	0.005811	XLF	0.0472277

# VOLATILITY INDEX (TAILOR MADE – STEP 2)

**GOLD Volatility**

Disease	Date	V_Close	V_Volume	Index_H/L	Bu/Be	Volatility
EBOLA	2014-03-04	H	L	3	-1.235705	-3.707115
	2014-03-05	L	L	1	0.163200	0.163200
	2014-03-06	H	L	3	0.993094	2.979282
	2014-03-07	H	L	3	-0.829686	-2.489057
	2014-03-10	L	L	1	0.030993	0.030993
ZIKA	...	...	...	...	...	...
	2017-09-25	H	H	4	1.046739	4.186956
	2017-09-26	H	L	3	-1.116197	-3.348591
	2017-09-27	H	L	3	-0.942014	-2.826042
	2017-09-28	L	L	1	0.188552	0.188552
	2017-09-29	L	H	2	-0.515504	-1.031007

**TLT Volatility**

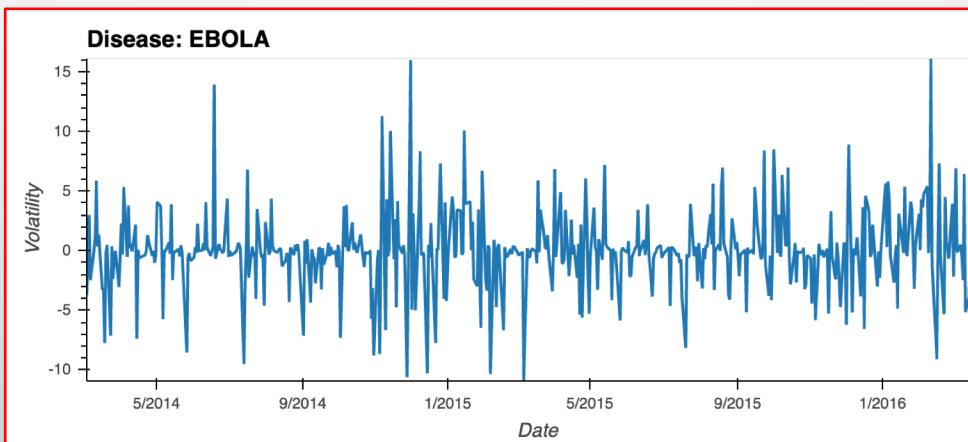
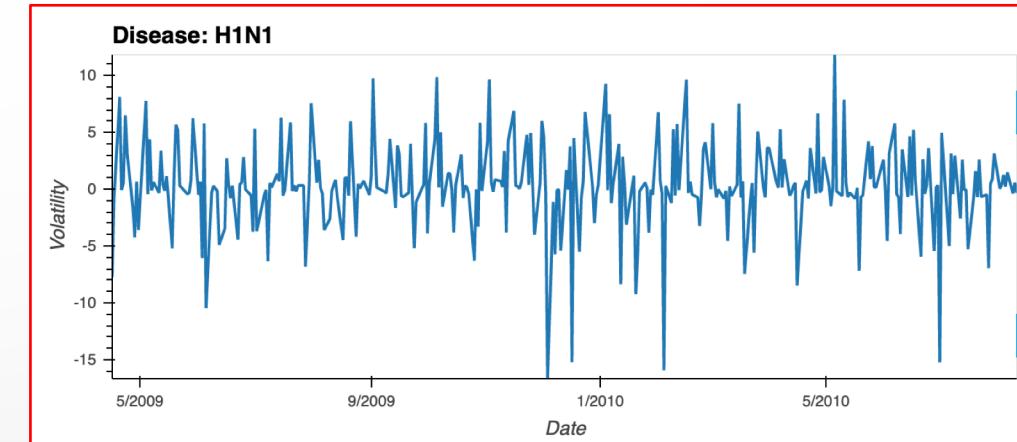
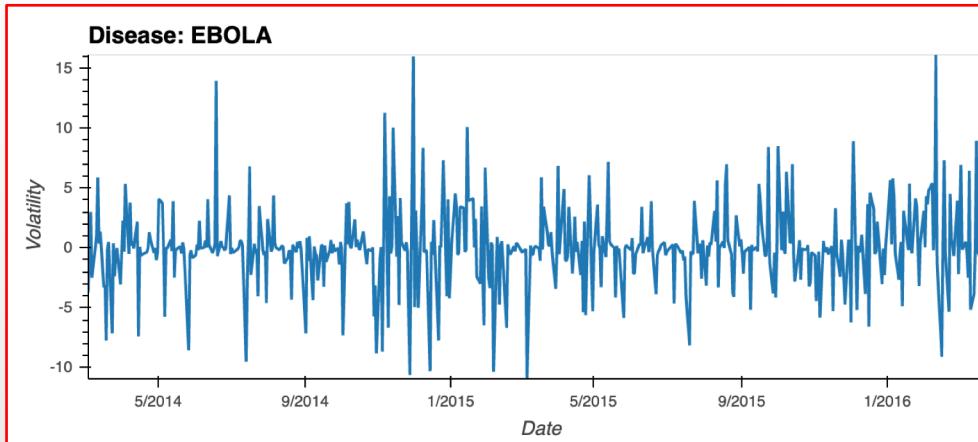
Disease	Date	V_Close	V_Volume	Index_H/L	Bu/Be	Volatility
EBOLA	2014-03-04	H	L	3	-1.504173	-4.512520
	2014-03-05	L	H	2	0.214176	0.428353
	2014-03-06	H	H	4	-0.984952	-3.939807
	2014-03-07	L	L	1	-0.628753	-0.628753
	2014-03-10	L	H	2	0.141658	0.283317
ZIKA	...	...	...	...	...	...
	2017-09-25	H	H	4	0.625991	2.503965
	2017-09-26	L	L	1	-0.181113	-0.181113
	2017-09-27	H	H	4	-1.506788	-6.027150
	2017-09-28	L	L	1	-0.296352	-0.296352
	2017-09-29	L	L	1	0.224935	0.224935

**SPY/Sectors Volatility**

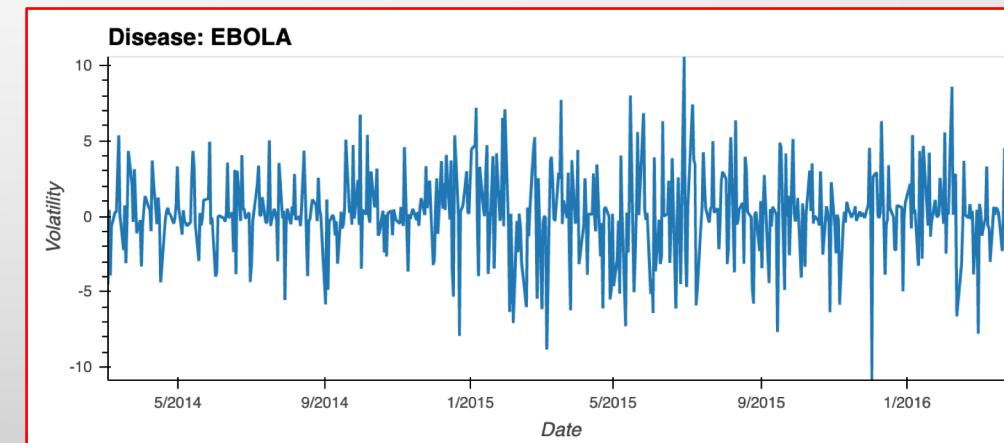
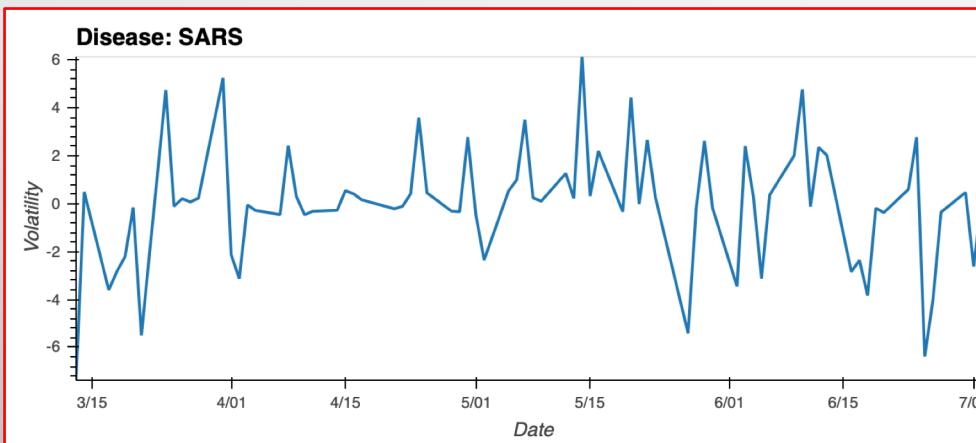
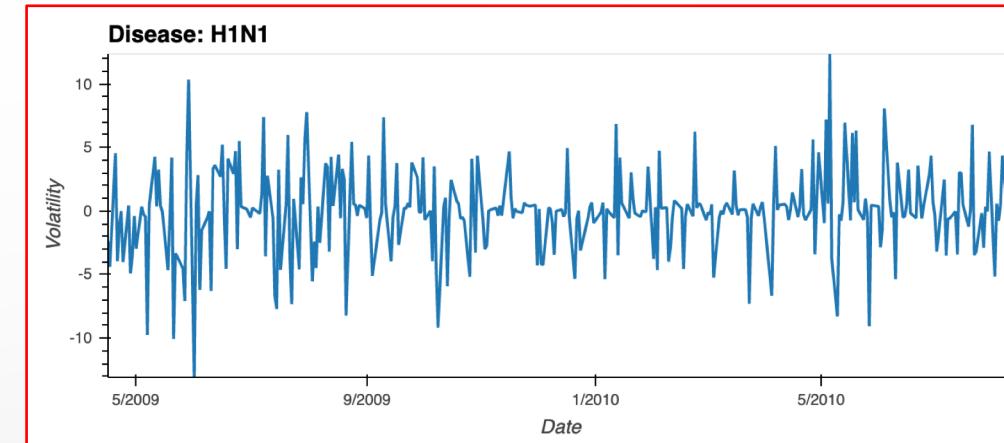
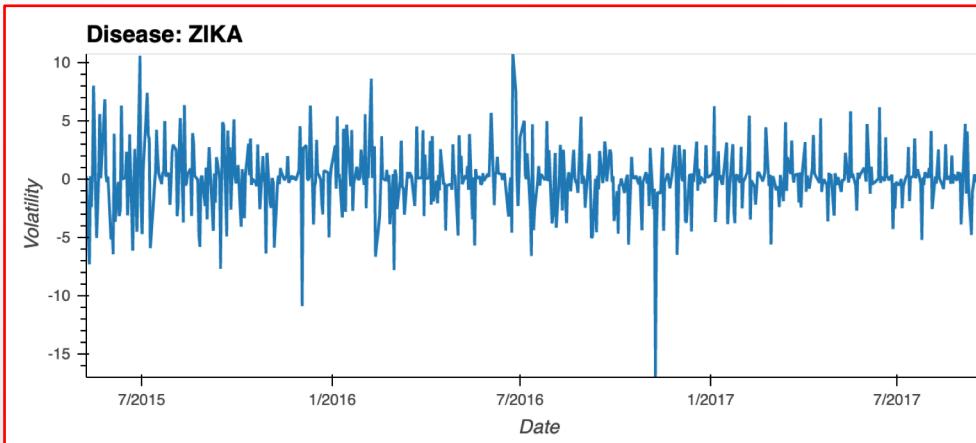
Disease	Date	V_XLF_Close	V_XLF_Volume	XLF_Index_H/L	XLF_Bu/Be	XLF_Volatility
EBOLA	2014-03-04	H	L	3	2.059497	6.178490
	2014-03-05	H	L	3	1.065022	3.195067
	2014-03-06	L	L	1	0.277316	0.277316
	2014-03-07	L	H	2	0.497788	0.995575
	2014-03-10	L	H	2	0.000000	0.000000
ZIKA	...	...	...	...	...	...
	2017-09-25	L	L	1	-0.117971	-0.117971
	2017-09-26	L	L	1	-0.039370	-0.039370
	2017-09-27	H	H	4	1.220953	4.883813
	2017-09-28	L	H	2	0.155642	0.311284
	2017-09-29	L	L	1	0.466200	0.466200

Indexes to identify Bu/Be Trends, based on %Change, Close Prices & Volumes

# VOLATILITY INDEX (TAILOR MADE – GOLD VISUALIZATION)



# VOLATILITY INDEX (TAILOR MADE – TLT VISUALIZATION)



# VOLATILITY INDEX (TAILOR MADE – S&P500 VISUALIZATION)

