

Signal	NS Values (second order SK/KPSS)	NL Values (BDS)	NL Values (Fast BDS)	NL Values (isnlarx)	Samples	Duration (s)	Comments
Linear Signal	1.0077832699099824e-18 NS	Pval: [0. 0. 0. 0. 0. 0.] NL	This is the p-value test for BDS [0.0050 0.0050 0.0050 0.0050 0.0050 0.0050] NL	N/A	50		
AR Signal	0.024724442961375718 NS	Pval: [1.24522657e-001 9.43641147e-002 7.83551682e-041 2.09740405e-075 3.72713675e-156 0.00000000e+000] Linear	This is the p-value test for BDS [1 1 1 1 1 1] Linear	N/A	100		Linear because Epsilon = 0.5 will have Pval = 0.0124>0.05
Alice Audio Signal (/1DCASEcarNoise.wav)	0.0061460556 NS	Pval: [0. 0. 0. 0. 0. 0.] NL	Signal = 20,000 samples This is the p-value test for BDS [0.0050 0.0050 0.0050 0.0050 0.0050 0.0050] NL	Detection ratio: 13.484 NL	124250		
Michael Nigro Signal (test_ES2004c_1980_1990_xxxxx_4_0)	0.0018076904 NS	pval [0. 0. 0. 0. 0. 0.] NL	Signal = 20,000 samples	Detection ratio: 339.81 NL	160000		

			This is the p-value test for BDS [0.0050 0.0050 0.0050 0.0050 0.0050 0.0050] NL				
PPG VR Signal	0.0005657944169099178 NS	Signal = 5000 samples Pval: [0. 0. 0. 0. 0. 0.] Signal = 10000 Samples pval [0. 0. 0. 0. 0. 0.] NL	Signal = 15000 samples This is the p-value test for BDS [0.0050 0.0050 0.0050 0.0050 0.0050 0.0050] NL	Detection ratio: 261.84 NL	5519800	40 minutes (5000 = 2.5 seconds, 10000 = 5 seconds)	Python BDS: Crashes after 30,000 samples MATLAB Fast BDS: Crashes after 20,000 samples

* All signals are normalized min max

* NL test: if p-val <0.05 then non-linear

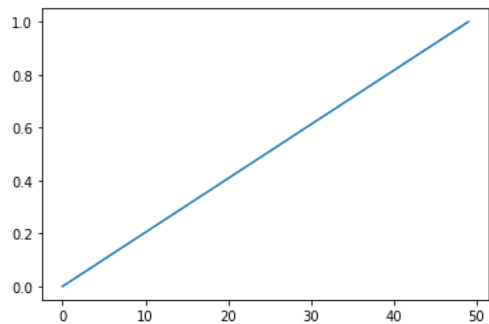
* NS test: if values are small then non-stationary

Isnarlx

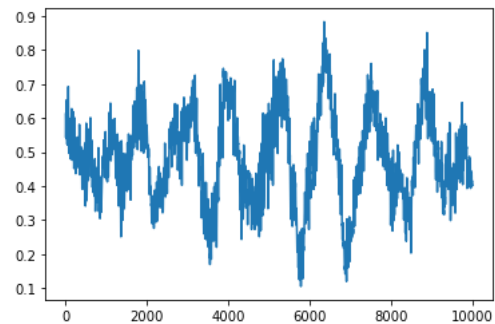
- Larger values (>2) indicate that a significant nonlinearity was detected.
- Smaller values (<0.5) indicate that any error unexplained by the linear model is mostly noise. That is, no significant nonlinearity was detected.
- Values close to 1 indicate that the nonlinearity detection test is not reliable and that a weak nonlinearity may be present.

Note: The fast BDS test depends on how much RAM size you offer it

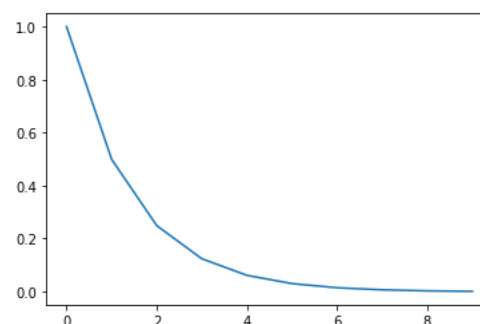
Linear Line



Alice Audio Signal



AR Signal



PPG

