



Forecasting

School of Information Studies
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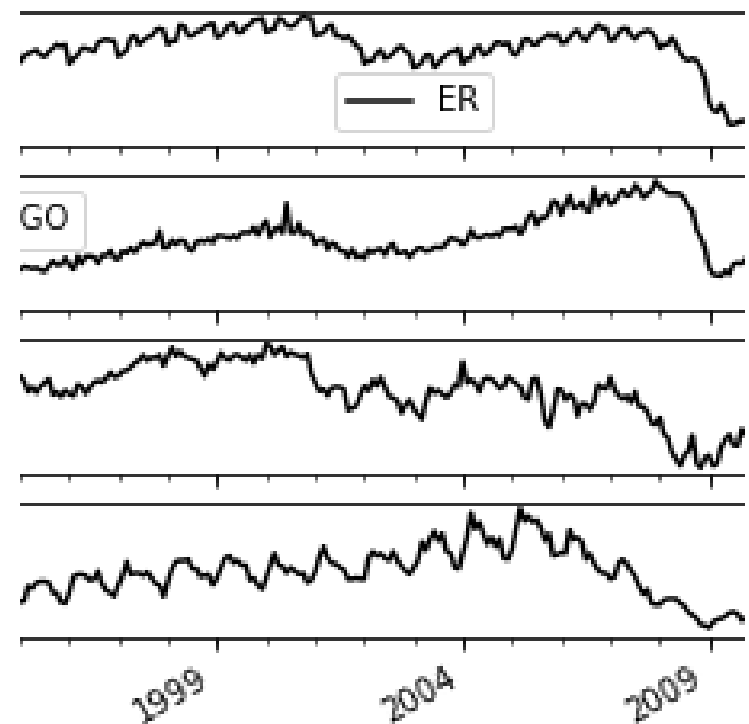
Patterns in Temporal Data

📞	10 Feb 2012 12:21	Missed Call	0779	Hel
📞	10 Feb 2012 12:29	2 Seconds	0779	Hel
📞	10 Feb 2012 13:47	1 Minute	0779	Hel
📞	10 Feb 2012 15:05	2 Minutes	0191	
📞	10 Feb 2012 16:48	1 Minute	0779	Hel
📞	10 Feb 2012 16:53	7 Seconds	0779	Hel
📞	10 Feb 2012 16:54	39 Seconds	0779	Hel
📞	10 Feb 2012 17:13	3 Seconds	0779	Hel
📞	10 Feb 2012 17:13	2 Seconds	0779	Hel
📞	10 Feb 2012 17:14	2 Seconds	0779	Hel
📞	10 Feb 2012 17:16	2 Seconds	0779	Hel
📞	10 Feb 2012 17:20	2 Seconds	0779	Hel
📞	10 Feb 2012 17:23	2 Seconds	0779	Hel
📞	10 Feb 2012 17:25	10 Seconds	0779	Hel
📞	10 Feb 2012 20:07	11 Seconds	0779	Hel
📞	11 Feb 2012 09:41	1 Minute	0779	Hel
📞	12 Feb 2012 10:54	1 Minute	0779	Hel
📞	13 Feb 2012 12:50	2 Minutes	0779	Hel
📞	13 Feb 2012 14:52	38 Seconds	0779	Hel
📞	14 Feb 2012 09:30	2 Minutes	0779	Hel
📞	14 Feb 2012 18:19	49 Seconds	0142	Orie
📞	15 Feb 2012 17:14	1 Minute	0779	Hel
📞	15 Feb 2012 17:18	Cancelled	0779	Hel
📞	15 Feb 2012 17:18	1 Minute	0779	Hel
📞	15 Feb 2012 17:26	Missed Call	0779	Hel
📞	15 Feb 2012 17:27	5 Seconds	0779	Hel



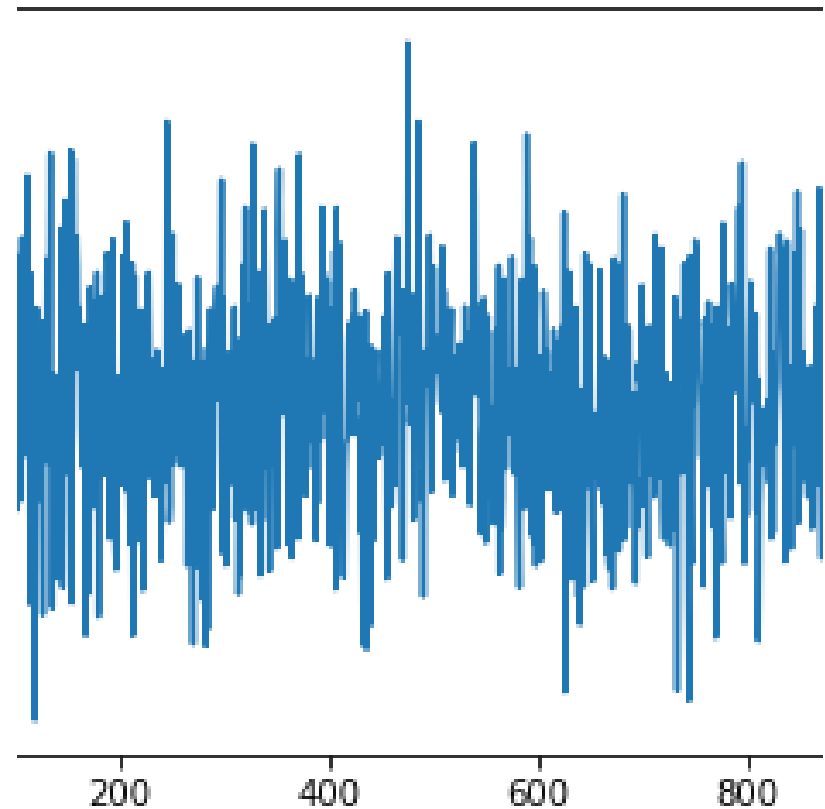
Forecasting

- White noise
- Covariance
- Seasonality
- Stationary

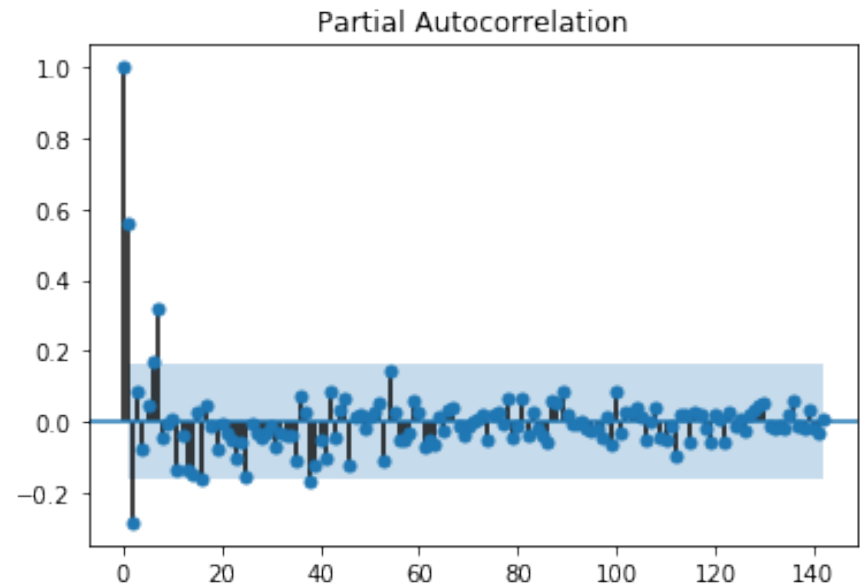
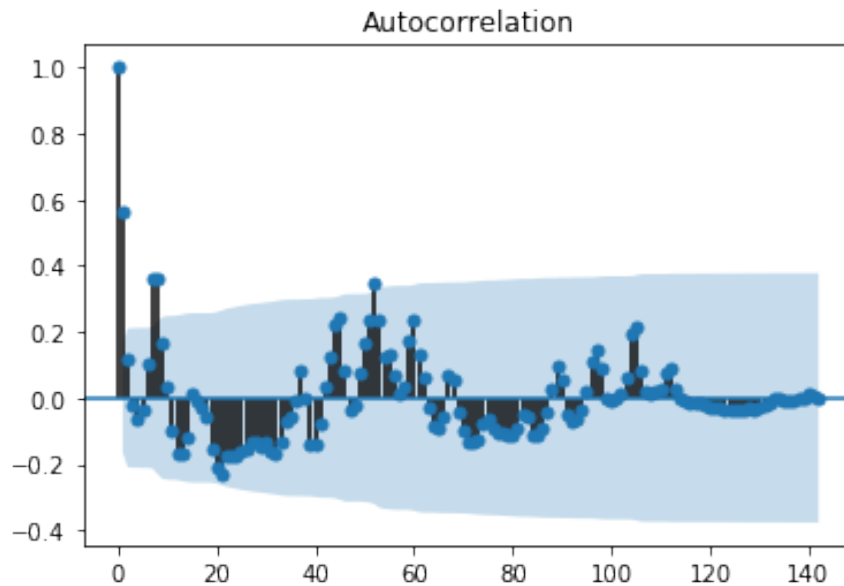


White Noise

- A random process
- Independent
- Identically distributed
- Mean = zero
- Variance = σ^2
- Correlation = zero

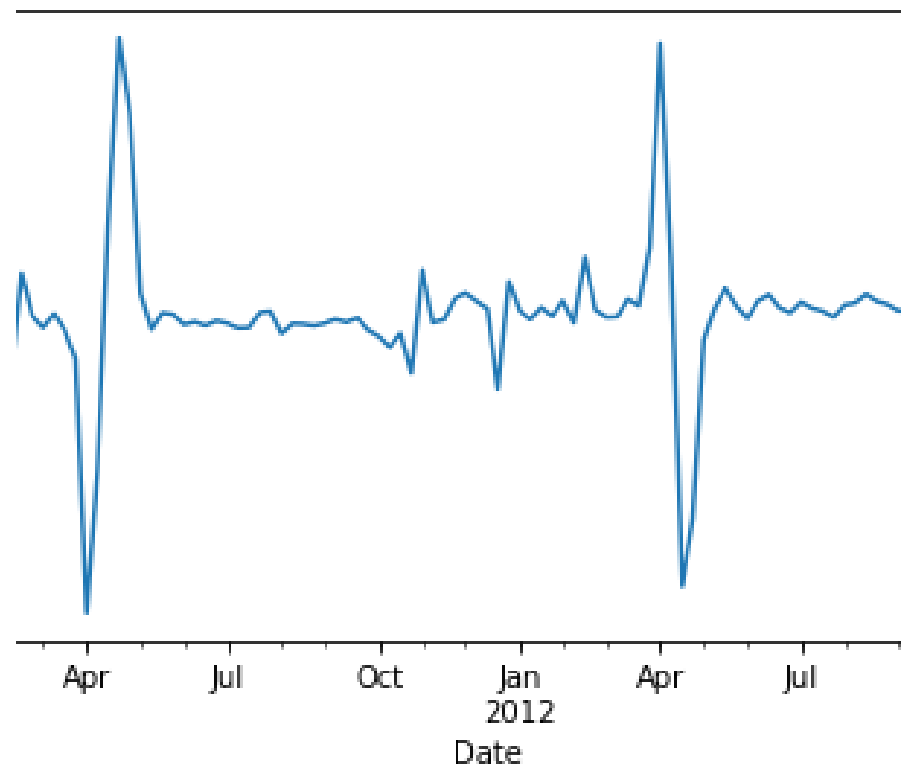


Covariance



Stationary

- Process does not vary
- Mean stable over time
- Variance stable over time
- White noise?
 - Yes
- Seasonality?
 - No



Seasonality

