

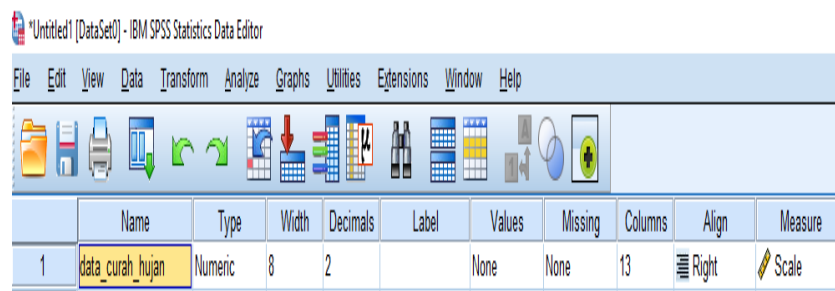
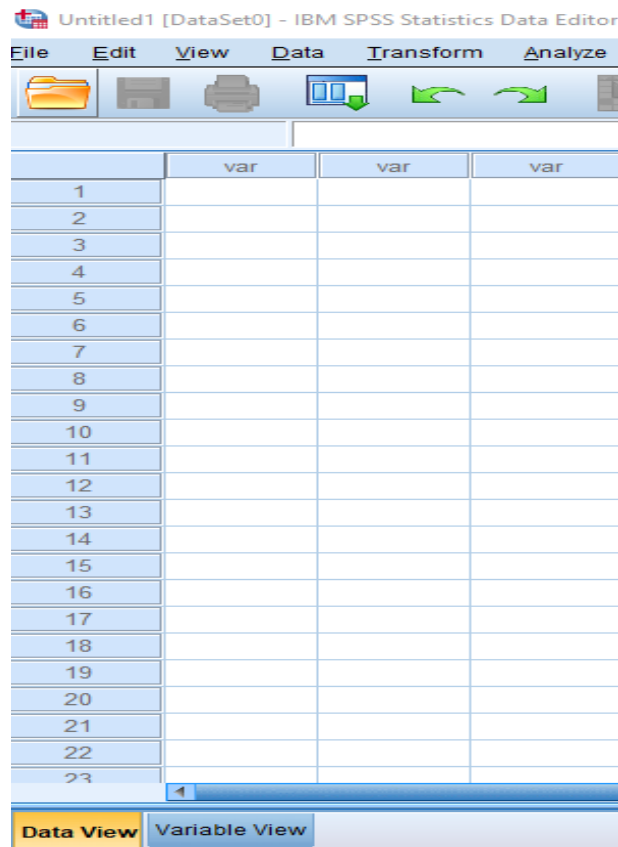
DAFTAR PUSTAKA

- Awwaluddin, A. N. (2014, Desember Sabtu). *Analisis Time Series*. Retrieved April Sabtu, 2020, from mainartikel:
<http://mainartikel.blogspot.com/2014/12/analisis-time-series.html?m=1>
- BMKG Wilayah III Denpasar. (2017). "*Badan Meteorologi Klimatologi dan Geofisika*". Denpasar: <http://balai3.denpasar.bmkg.go.id/daftar-istilah-musiman>.
- BPS Kabupaten Cilacap, "*Cilacap Dalam Angka 2020*". Cilacap: BPS Kabupaten Cilacap, 2020.
- Chan, J. D.-S. (2008). *Time Series Analysis With Application In R*. Iowa: Springer Science+Business Media, LLC.
- Fadjrin, N. N., & Wibowo, A. (Mei 2020). Pemodelan Deret Waktu Point Liga Italia Serie A dengan Pendekatan Regresi Berdasarkan RMSE (Root Mean Square Score) Terkecil dan Skor Maksimal Tiap Pekan. *Statistika*, Vol. 8, No. 1, 78-87.
- Faulina, R., 2017. Hybrid ARIMA-ANFIS for Rainfall Prediction in Indonesia (preprint). Open Science Framework.
<https://doi.org/10.31219/osf.io/vw8rx>
- Halim, S. 2006. Diktat Time Series Analysis. Universitas Kristen Petra. Surabaya.
- Mahmud, I., Bari, S.H., Rahman, M.T.U., 2016. Monthly rainfall forecast of Bangladesh using autoregressive integrated moving average method. *Environmental Engineering Research* 22, 162–168.
<https://doi.org/10.4491/eer.2016.075>
- Makridakis, S., Wheelwright, S. C., & McGee, V. E. (1999). "*Metode dan Aplikasi Peramalan jilid 1*". Tangerang: Binarupa Aksara.

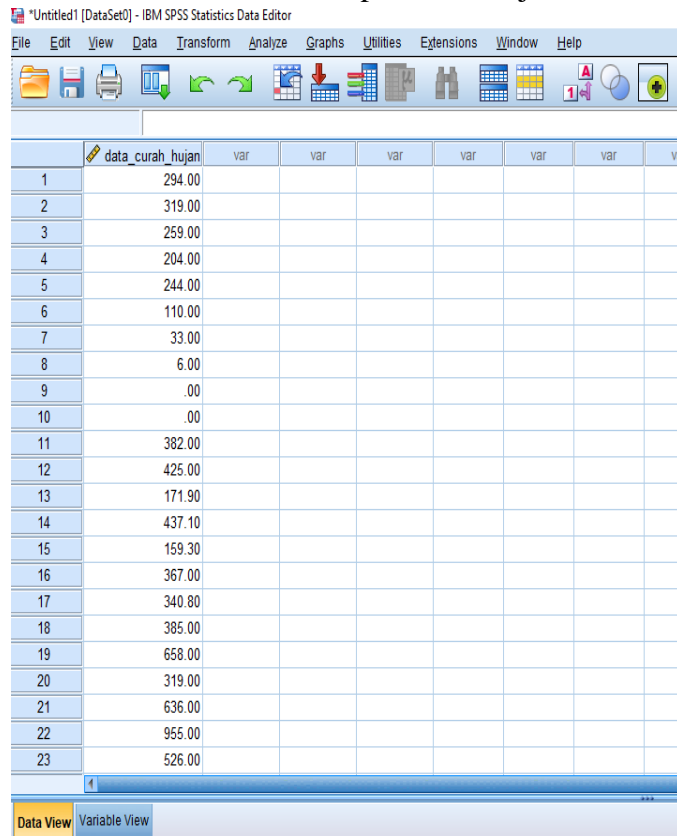
- Mukhaiyar, & Utriweni. (2012). Pengenalan Analisis Deret Waktu (Time Series Analysis). *MA 2081 Statistika Dasar*.
- Murat, M., Malinowska, I., Gos, M., Krzyszcak, J., 2018. Forecasting daily meteorological time series using ARIMA and regression models. *International Agrophysics* 32, 253–264. <https://doi.org/10.1515/intag-2017-0007>
- Sridhar, M., Raju, K.P., Rao, C.S., Ratnam, D.V., n.d. Prediction and Analysis of Rain Attenuation using ARIMA Model at Low Latitude Tropical Station 2, 6.
- Wei, W. W. (2006). *Time Series Analysis: Univariate and Multivariate Method. 2nd Edition*. Boston: Pearson Addison Wesley.
- Wenthy's. (2011, Desember Sabtu). *Pengertian Time Series (Deret Berkala)*. Retrieved April Sabtu, 2020, from wenthyoktavin: http://wenthyoktavin.blogspot.com/2011/12/time-series-deret-berkala_3237.html?m=1

LAMPIRAN

1. Langkah-langkah ARIMA dengan menggunakan Program SPSS
 - a. Menginput data curah hujan ke program SPSS
 - Membuka program SPSS, yaitu dengan cara klik Start, pilih all program, kemudian klik IBM SPSS 25
 - Setelah muncul Blank Dokumen, klik Variabel View lalu input periode dan data curah hujan

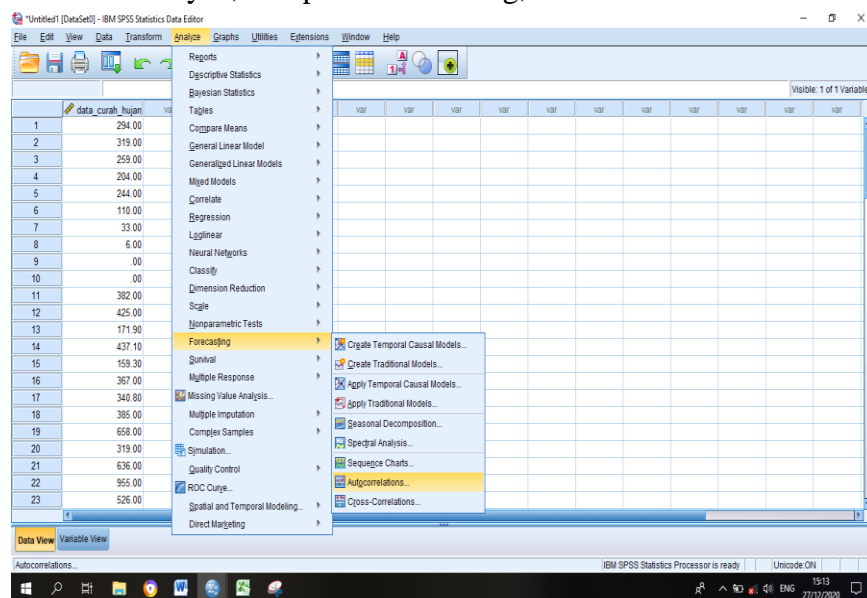


- Lalu klik Data View dan input curah hujan

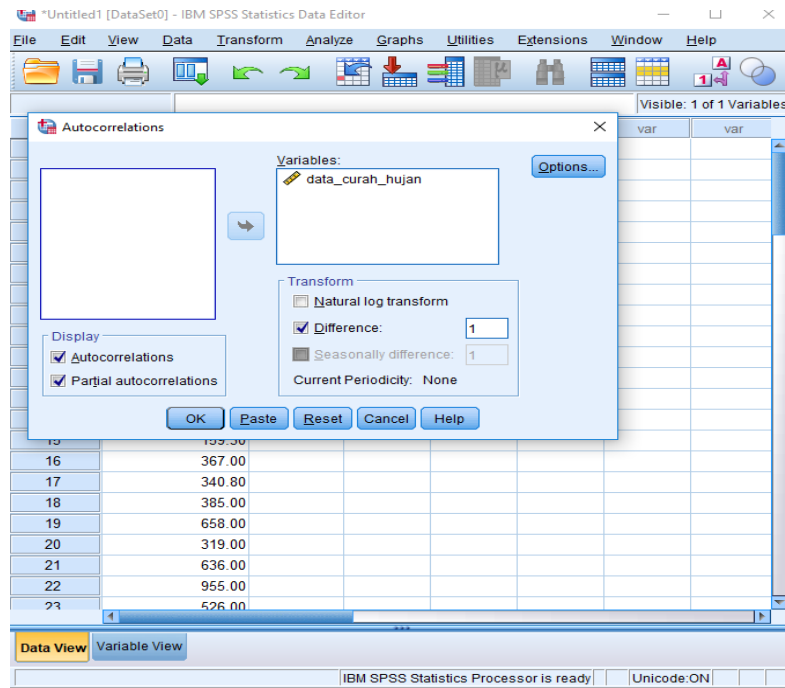


- b. Membuat plot ACF dan PACF

- Klik Analyze, lalu pilih Forecasting, dan klik Autocorrelation.

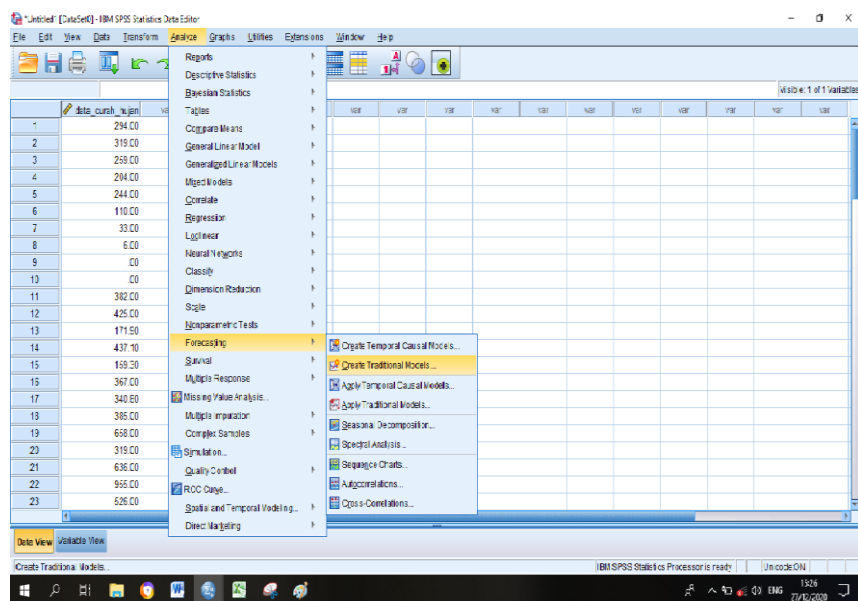


- Lalu masukan data curah hujan ke variabel, dan centang ACF dan PACF lalu klik OK

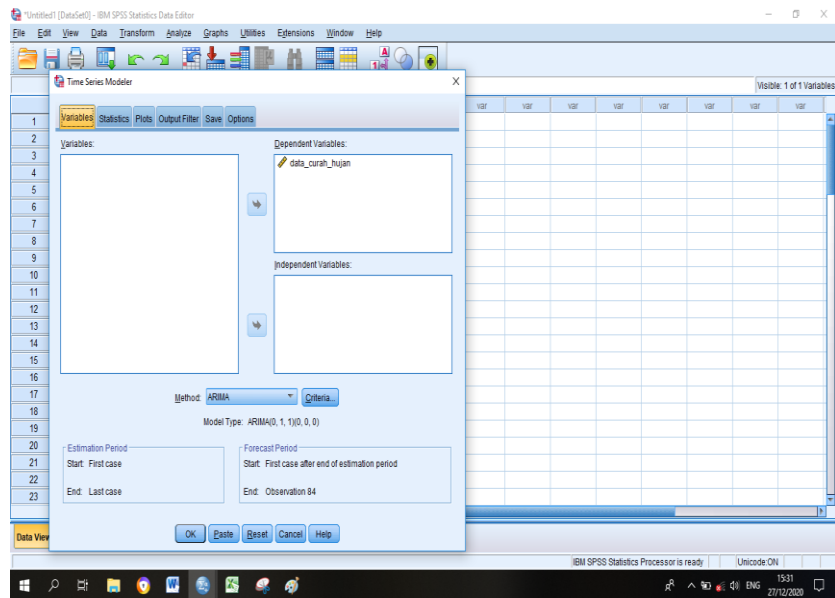


c. Peramalan

- Klik Analyze, lalu pilih dan klik Forecasting ,dan pilih Create Traditional Models



- Lalu masukan data curah hujan ke dependent variabel, pilih Method ARIMA dan Criteria yang didapat lalu OK



2. Data Curah Hujan Bulanan Tahun 2020 dan 2021

| Bulan | Data Curah Hujan (mm) | | | | |
|-----------|-----------------------|-------|-------|-------|-------|
| | 2015 | 2016 | 2017 | 2018 | 2019 |
| Januari | 294 | 171,9 | 371 | 298,1 | 365 |
| Februari | 319 | 437,1 | 375,5 | 1770 | 463 |
| Maret | 259 | 159,3 | 140,6 | 199 | 403 |
| April | 204 | 367 | 408,9 | 339 | 279 |
| Mei | 244 | 340,8 | 148 | 29 | 174 |
| Juni | 110 | 385 | 271 | 40 | 9 |
| Juli | 33 | 658 | 67,5 | 13 | 6 |
| Agustus | 6 | 319 | 2,7 | 4 | 0 |
| September | 0 | 636 | 197,5 | 18 | 0 |
| Oktober | 0 | 955 | 838 | 84 | 4,4 |
| November | 382 | 526 | 307 | 682 | 145 |
| Desember | 425 | 483 | 366 | 471 | 120,5 |

3. Output Diagram ACF dan PACF Data Curah Hujan

Partial Autocorrelations

Series: Data_Curah_Hujan

| Lag | Partial Autocorrelation | Std. Error |
|-----|-------------------------|------------|
| 1 | .280 | .129 |
| 2 | .200 | .129 |
| 3 | -.036 | .129 |
| 4 | .087 | .129 |
| 5 | -.228 | .129 |
| 6 | -.220 | .129 |
| 7 | -.127 | .129 |
| 8 | -.016 | .129 |
| 9 | .184 | .129 |
| 10 | .151 | .129 |
| 11 | -.093 | .129 |
| 12 | .060 | .129 |
| 13 | -.062 | .129 |
| 14 | -.068 | .129 |
| 15 | .055 | .129 |
| 16 | .124 | .129 |

Autocorrelations

Series: Data_Curah_Hujan

| Lag | Autocorrelation | Std. Error ^a | Box-Ljung Statistic | | |
|-----|-----------------|-------------------------|---------------------|----|-------------------|
| | | | Value | df | Sig. ^b |
| 1 | .280 | .126 | 4.960 | 1 | .026 |
| 2 | .263 | .125 | 9.381 | 2 | .009 |
| 3 | .083 | .124 | 9.832 | 3 | .020 |
| 4 | .140 | .123 | 11.140 | 4 | .025 |
| 5 | -.142 | .122 | 12.497 | 5 | .029 |
| 6 | -.222 | .120 | 15.901 | 6 | .014 |
| 7 | -.270 | .119 | 21.008 | 7 | .004 |
| 8 | -.177 | .118 | 23.237 | 8 | .003 |
| 9 | -.037 | .117 | 23.336 | 9 | .005 |
| 10 | .038 | .116 | 23.444 | 10 | .009 |
| 11 | -.026 | .115 | 23.495 | 11 | .015 |
| 12 | .148 | .114 | 25.192 | 12 | .014 |
| 13 | .125 | .112 | 26.429 | 13 | .015 |
| 14 | .108 | .111 | 27.366 | 14 | .017 |
| 15 | .046 | .110 | 27.538 | 15 | .025 |
| 16 | .107 | .109 | 28.501 | 16 | .028 |

a. The underlying process assumed is independence (white noise).

b. Based on the asymptotic chi-square approximation.

5. Output Diagram ACF dan PACF Data Curah Hujan hasil Differencing 1

Autocorrelations

Series: Data_Curah_Hujan

| Lag | Autocorrelation | Std. Error ^a | Box-Ljung Statistic | | |
|-----|-----------------|-------------------------|---------------------|----|-------------------|
| | | | Value | df | Sig. ^b |
| 1 | -.489 | .127 | 14.835 | 1 | .000 |
| 2 | .109 | .126 | 15.591 | 2 | .000 |
| 3 | -.165 | .125 | 17.345 | 3 | .001 |
| 4 | .236 | .124 | 21.004 | 4 | .000 |
| 5 | -.140 | .122 | 22.313 | 5 | .000 |
| 6 | -.023 | .121 | 22.349 | 6 | .001 |
| 7 | -.094 | .120 | 22.965 | 7 | .002 |
| 8 | -.030 | .119 | 23.028 | 8 | .003 |
| 9 | .048 | .118 | 23.194 | 9 | .006 |
| 10 | .098 | .117 | 23.898 | 10 | .008 |
| 11 | -.168 | .115 | 26.020 | 11 | .006 |
| 12 | .140 | .114 | 27.523 | 12 | .006 |
| 13 | .001 | .113 | 27.523 | 13 | .011 |
| 14 | .018 | .112 | 27.548 | 14 | .016 |
| 15 | -.088 | .111 | 28.178 | 15 | .020 |
| 16 | .111 | .109 | 29.217 | 16 | .023 |

a. The underlying process assumed is independence (white noise).

b. Based on the asymptotic chi-square approximation.

Partial Autocorrelations

Series: Data_Curah_Hujan

| Lag | Partial Autocorrelation | Std. Error |
|-----|-------------------------|------------|
| 1 | -.489 | .130 |
| 2 | -.170 | .130 |
| 3 | -.252 | .130 |
| 4 | .067 | .130 |
| 5 | .012 | .130 |
| 6 | -.108 | .130 |
| 7 | -.196 | .130 |
| 8 | -.328 | .130 |
| 9 | -.240 | .130 |
| 10 | .017 | .130 |
| 11 | -.139 | .130 |
| 12 | -.008 | .130 |
| 13 | .007 | .130 |
| 14 | -.126 | .130 |
| 15 | -.184 | .130 |
| 16 | -.078 | .130 |

DAFTAR RIWAYAT HIDUP

Nama : Sri Lestari
Tempat/Tanggal Lahir : Cilacap, 24 Mei 1998
Alamat : Panikel, RT 02/RW 08 Kec. Kampung Laut
Kab. Cilacap
Agama : Islam
Nama Orang Tua :
Ayah : Parto Suwito Bangun
Ibu : Sutinah

Riwayat Pendidikan Formal

1. SD Negeri Panikel 03 (Lulus Tahun 2010)
2. SMP Negeri 1 Satu Atap Kampung Laut (Lulus Tahun 2013)
3. SMA Negeri 1 Bantarsari (Lulus Tahun 2016)

Demikian riwayat hidup penulis, dibuat dengan sebenarnya-benarnya.

Cilacap, 16 Januari 2021

Penulis

Sri Lestari

NIM. 16442011001