## Emilia Romagna Grand Prix, 2021

### Forecasting Mick Schumacher's Next 5 Lap Times Nathan Jones 2022

| Name of Variable = time                   |          |  |  |  |
|---|----------|--|--|--|
| Period(s) of Differencing                 | 1,1      |  |  |  |
| Mean of Working Series                    | -0.16803 |  |  |  |
| Standard Deviation                        | 21.32571 |  |  |  |
| Number of Observations                    | 59       |  |  |  |
| Observation(s) eliminated by differencing | 2        |  |  |  |

| Autocorrelation Check for White Noise |       |    |        |        |        |        |        |       |        |
|---------------------------------------|-------|----|--------|--------|--------|--------|--------|-------|--------|
| To<br>Lag                             |       |    |        |        |        |        |        |       |        |
| 6                                     | 39.77 | 6  | <.0001 | -0.677 | 0.355  | -0.225 | 0.033  | 0.023 | 0.013  |
| 12                                    | 60.57 | 12 | <.0001 | -0.019 | -0.121 | 0.253  | -0.274 | 0.300 | -0.194 |

| Variance Estimate   | 454.8142 |
|---------------------|----------|
| Std Error Estimate  | 21.32637 |
| AIC                 | 528.5082 |
| SBC                 | 528.5082 |
| Number of Residuals | 59       |

#### \* AIC and SBC do not include log determinant.

| Autocorrelation Check of Residuals |            |    |            |                  |        |        |        |        |        |
|------------------------------------|------------|----|------------|------------------|--------|--------|--------|--------|--------|
| To<br>Lag                          | Chi-Square | DF | Pr > ChiSq | Autocorrelations |        |        |        |        |        |
| 6                                  | 39.78      | 6  | <.0001     | -0.677           | 0.355  | -0.225 | 0.033  | 0.023  | 0.013  |
| 12                                 | 60.57      | 12 | <.0001     | -0.019           | -0.121 | 0.253  | -0.274 | 0.300  | -0.194 |
| 18                                 | 73.25      | 18 | <.0001     | 0.026            | 0.062  | -0.171 | 0.198  | -0.177 | 0.212  |
| 24                                 | 77.96      | 24 | <.0001     | -0.170           | 0.092  | -0.047 | 0.035  | 0.004  | -0.098 |

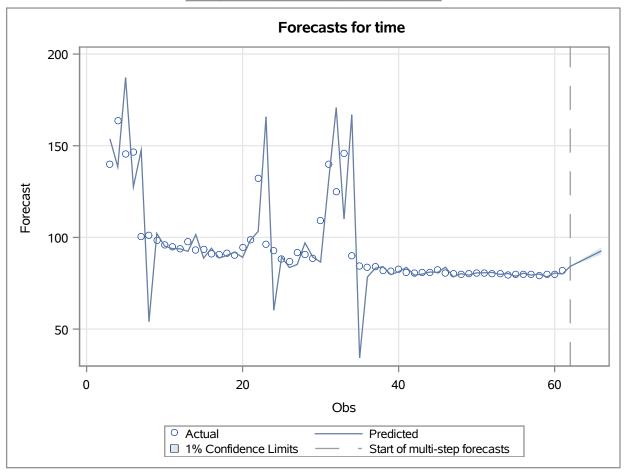
| Model for variable time   |     |  |  |  |
|---------------------------|-----|--|--|--|
| Period(s) of Differencing | 1,1 |  |  |  |

No mean term in this model.

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| Forecasts for variable time |          |           |                            |         |  |  |  |  |
|-----------------------------|----------|-----------|----------------------------|---------|--|--|--|--|
| Obs                         | Forecast | Std Error | 1%<br>Confidence<br>Limits |         |  |  |  |  |
| 62                          | 84.2130  | 21.3264   | 83.9457                    | 84.4803 |  |  |  |  |
| 63                          | 86.3240  | 47.6872   | 85.7263                    | 86.9217 |  |  |  |  |
| 64                          | 88.4350  | 79.7960   | 87.4349                    | 89.4351 |  |  |  |  |
| 65                          | 90.5460  | 116.8094  | 89.0820                    | 92.0100 |  |  |  |  |
| 66                          | 92.6570  | 158.1606  | 90.6747                    | 94.6393 |  |  |  |  |



| Outlier Detection Summary |      |  |  |  |
|---------------------------|------|--|--|--|
| Maximum number searched   | 2    |  |  |  |
| Number found              | 2    |  |  |  |
| Significance used         | 0.05 |  |  |  |

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| Outlier Details |          |          |            |                      |  |  |  |
|-----------------|----------|----------|------------|----------------------|--|--|--|
| Obs             | Туре     | Estimate | Chi-Square | Approx<br>Prob>ChiSq |  |  |  |
| 33              | Additive | 39.89767 | 1116.43    | <.0001               |  |  |  |
| 22              | Additive | 33.41017 | 782.88     | <.0001               |  |  |  |