Nama : M. Hasyim Abdillah P.

NIM : 1101191095

Kelas : TT-43-11

1. Bagaimana prediksi jumlah korban di tahun 2021?

Data:

|  |  |
| --- | --- |
| ***Tahun*** | ***Jumlah Korban*** |
| 2017 | 308.641 |
| 2018 | 359.174 |
| 2019 | 366.053 |
| 2020 | 622.790 |

Analisis regresi:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Regression Statistics* | |  |  |  |  |  |  |  |
| Multiple R | 0,959086866 |  |  |  |  |  |  |  |
| R Square | 0,919847617 |  |  |  |  |  |  |  |
| Adjusted R Square | 0,586514284 |  |  |  |  |  |  |  |
| Standard Error | 141190,049 |  |  |  |  |  |  |  |
| Observations | 4 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| ANOVA |  |  |  |  |  |  |  |  |
|  | *df* | *SS* | *MS* | *F* | *Significance F* |  |  |  |
| Regression | 1 | 6,86324E+11 | 6,86324E+11 | 34,42870647 | 0,027838366 |  |  |  |
| Residual | 3 | 59803889777 | 19934629926 |  |  |  |  |  |
| Total | 4 | 7,46127E+11 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95,0%* | *Upper 95,0%* |
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Tahun | 205,2133574 | 34,97399735 | 5,867598015 | 0,009872898 | 93,91048879 | 316,5162261 | 93,91048879 | 316,5162261 |
|  |  |  |  |  |  |  |  |  |

Karena nilai significance F kurang dari 0,05 maka analisis dapat dilanjutkan, didapat pula nilai P lebih kecil dari 0,05, sehingga didapat persamaan

Prediksi jumlah korban di tahun 2021:

1. Bagaimana prediksi total kerugian di tahun 2021?

Data:

|  |  |
| --- | --- |
| ***Tahun*** | ***Jumlah kerugian*** |
| 2017 | $ 1.426.668.409,00 |
| 2018 | $ 2.709.160.726,00 |
| 2019 | $ 3.633.089.225,50 |
| 2020 | $ 4.169.074.294,00 |

Analisis regresi:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Regression Statistics* | |  |  |  |  |  |  |  |
| Multiple R | 0,983762745 |  |  |  |  |  |  |  |
| R Square | 0,967789139 |  |  |  |  |  |  |  |
| Adjusted R Square | 0,951683708 |  |  |  |  |  |  |  |
| Standard Error | 263971045,9 |  |  |  |  |  |  |  |
| Observations | 4 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| ANOVA |  |  |  |  |  |  |  |  |
|  | *df* | *SS* | *MS* | *F* | *Significance F* |  |  |  |
| Regression | 1 | 4,18717E+18 | 4,18717E+18 | 60,09085748 | 0,016237255 |  |  |  |
| Residual | 2 | 1,39361E+17 | 6,96807E+16 |  |  |  |  |  |
| Total | 3 | 4,32654E+18 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95,0%* | *Upper 95,0%* |
| Intercept | -1,84417E+12 | 2,38287E+11 | -7,739303298 | 0,016288579 | -2,86944E+12 | -8,18909E+11 | -2,86944E+12 | -8,18909E+11 |
| Tahun | 915114615,5 | 118051440,5 | 7,751829299 | 0,016237255 | 407180262,6 | 1423048968 | 407180262,6 | 1423048968 |

Karena nilai significance F kurang dari 0,05 maka analisis dapat dilanjutkan, didapat pula nilai P lebih kecil dari 0,05, sehingga didapat persamaan

dengan satuan USD

Prediksi total kerugian di tahun 2021:

1. Apakah terdapat perbedaan yang signifikan pada jumlah korban berdasarkan perbedaan interval umurnya di tiap tahunnya?

Data:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Age*** | ***2017*** | ***2018*** | ***2019*** | ***2020*** |
| < 20 | 9.053 | 9.129 | 10.724 | 23.186 |
| 20 - 29 | 41.132 | 40.924 | 44.496 | 70.791 |
| 30 - 39 | 45.458 | 46.342 | 52.820 | 88.364 |
| 40 - 49 | 44.878 | 50.545 | 51.864 | 91.568 |
| 50 - 59 | 43.764 | 48.642 | 50.608 | 85.967 |
| > 60 | 49.523 | 62.085 | 68.013 | 105.301 |

Analisi ANOVA:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *SUMMARY* | *Count* | *Sum* | *Average* | *Variance* |  |  |
| < 20 | 4 | 52092 | 13.023,00 | 46.498.702,00 |  |  |
| 20 - 29 | 4 | 197343 | 49.335,75 | 207.269.994,92 |  |  |
| 30 - 39 | 4 | 232984 | 58.246,00 | 413.924.520,00 |  |  |
| 40 - 49 | 4 | 238855 | 59.713,75 | 460.159.090,92 |  |  |
| 50 - 59 | 4 | 228981 | 57.245,25 | 374.917.340,92 |  |  |
| > 60 | 4 | 284922 | 71.230,50 | 575.335.667,67 |  |  |
|  |  |  |  |  |  |  |
| 2017 | 6 | 233808 | 38.968,00 | 222.209.592,40 |  |  |
| 2018 | 6 | 257667 | 42.944,50 | 323.140.262,70 |  |  |
| 2019 | 6 | 278525 | 46.420,83 | 366.460.063,37 |  |  |
| 2020 | 6 | 465177 | 77.529,50 | 831.107.373,10 |  |  |
|  |  |  |  |  |  |  |
| ANOVA |  |  |  |  |  |  |
| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
| Rows | 8081724738 | 5 | 1616344948 | 38,31038194 | 5,05555E-08 | 2,901294536 |
| Columns | 5601454229 | 3 | 1867151410 | 44,25496164 | 1,09471E-07 | 3,287382105 |
| Error | 632861720,1 | 15 | 42190781,34 |  |  |  |
|  |  |  |  |  |  |  |
| Total | 14316040687 | 23 |  |  |  |  |

Karena nilai P lebih kecil dari 0,05 maka ditolak, sehingga dapat disimpulkan bahwa terdapat perbedaan yang signifikan pada jumlah korban berdasarkan interval umurnya