

# Imputacijos Rezultato Ataskaita

## Pagrindinė informacija

| Parametras              | Reikšmė                                                               |
|-------------------------|-----------------------------------------------------------------------|
| Rezultato ID            | 3cc3929f-8130-4562-9b7c-3f7e60a6112d                                  |
| Originalus failas       | Gretos_8_ekonominiai_rodikliai.csv                                    |
| Imputuotas failas       | Gretos_8_ekonominiai_rodikliai_imputed_random_forest_20251024_224022_ |
| Modelio tipas           | Random Forest                                                         |
| N Estimators            | 100                                                                   |
| Random State            | 42                                                                    |
| Trūkstamų pradžioje     | 52,391                                                                |
| Trūkstamų po apdorojimo | 0                                                                     |
| Apdoroti stulpeliai     | 8                                                                     |
| Sukūrimo data           | 2025-10-24 22:40:27                                                   |
| Max Depth               | 15                                                                    |

## Modelio metrikos

| Stulpelis          | RMSE      | R <sup>2</sup> | MAPE (%) | MAE       | Imties dydis |
|--------------------|-----------|----------------|----------|-----------|--------------|
| population_density | 351.1051  | 0.8535         | 181.34   | 155.5957  | 1401         |
| hospital_beds      | 31.9539   | 0.8947         | 9.62     | 20.5582   | 704          |
| at_risk_of_poverty | 2.6811    | 0.8719         | 12.42    | 1.8268    | 872          |
| low_work_intensity | 2.2585    | 0.7807         | 21.71    | 1.6528    | 424          |
| gdp_current_prices | 4120.3227 | 0.9183         | 12.38    | 2565.8892 | 1136         |
| rd_expenditure     | 1.8359    | 0.3523         | 35.37    | 0.4128    | 423          |
| internet_access    | 3.2076    | 0.8928         | 2.96     | 2.3919    | 425          |
| tertiary_education | 3.2501    | 0.9058         | 8.11     | 2.2684    | 746          |

## Požymijų svarba

Užpildant stulpelį: population\_density

| Požymis            | Svarba |
|--------------------|--------|
| geo                | 0.4792 |
| hospital_beds      | 0.1584 |
| gdp_current_prices | 0.1421 |
| low_work_intensity | 0.0506 |
| tertiary_education | 0.0481 |
| at_risk_of_poverty | 0.0465 |
| time_period        | 0.0301 |
| rd_expenditure     | 0.0244 |
| internet_access    | 0.0208 |

Užpildant stulpelį: hospital\_beds

| Požymis            | Svarba |
|--------------------|--------|
| geo                | 0.3318 |
| gdp_current_prices | 0.1998 |
| population_density | 0.1415 |
| low_work_intensity | 0.0876 |
| tertiary_education | 0.0620 |
| rd_expenditure     | 0.0510 |
| at_risk_of_poverty | 0.0475 |
| time_period        | 0.0403 |
| internet_access    | 0.0385 |

Užpildant stulpelį: at\_risk\_of\_poverty

| Požymis            | Svarba |
|--------------------|--------|
| low_work_intensity | 0.2199 |
| population_density | 0.2039 |
| gdp_current_prices | 0.1625 |
| hospital_beds      | 0.1480 |
| geo                | 0.0951 |
| tertiary_education | 0.0843 |
| rd_expenditure     | 0.0299 |
| internet_access    | 0.0286 |
| time_period        | 0.0278 |

Užpildant stulpelį: low\_work\_intensity

| Požymis | Svarba |
|---------|--------|
|         |        |

|                    |        |
|--------------------|--------|
| at_risk_of_poverty | 0.3749 |
| geo                | 0.1577 |
| hospital_beds      | 0.1123 |
| gdp_current_prices | 0.0918 |
| population_density | 0.0849 |
| time_period        | 0.0644 |
| tertiary_education | 0.0436 |
| internet_access    | 0.0387 |
| rd_expenditure     | 0.0317 |

Užpildant stulpelį: gdp\_current\_prices

| Požymis            | Svarba |
|--------------------|--------|
| at_risk_of_poverty | 0.2303 |
| population_density | 0.1676 |
| geo                | 0.1515 |
| tertiary_education | 0.1331 |
| hospital_beds      | 0.1109 |
| internet_access    | 0.0621 |
| low_work_intensity | 0.0619 |
| rd_expenditure     | 0.0415 |
| time_period        | 0.0412 |

Užpildant stulpelį: rd\_expenditure

| Požymis            | Svarba |
|--------------------|--------|
| gdp_current_prices | 0.2453 |
| geo                | 0.2073 |
| hospital_beds      | 0.1311 |
| population_density | 0.1304 |
| at_risk_of_poverty | 0.1081 |
| tertiary_education | 0.0639 |
| low_work_intensity | 0.0521 |
| time_period        | 0.0422 |
| internet_access    | 0.0197 |

Užpildant stulpelį: internet\_access

| Požymis            | Svarba |
|--------------------|--------|
| time_period        | 0.2676 |
| gdp_current_prices | 0.2216 |
| tertiary_education | 0.1609 |
| rd_expenditure     | 0.0944 |
| at_risk_of_poverty | 0.0648 |

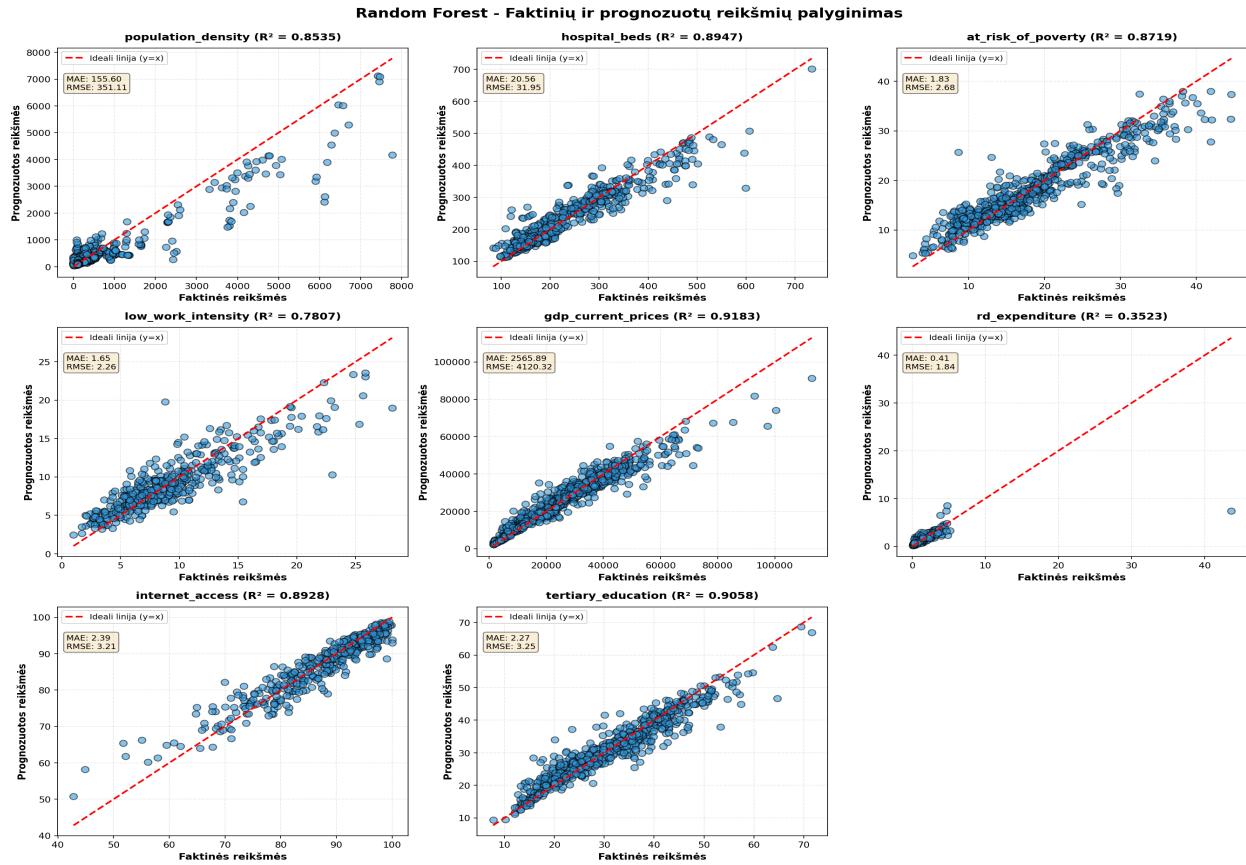
|                    |        |
|--------------------|--------|
| hospital_beds      | 0.0563 |
| geo                | 0.0514 |
| low_work_intensity | 0.0488 |
| population_density | 0.0342 |

Užpildant stulpelį: tertiary\_education

| Požymis            | Svarba |
|--------------------|--------|
| gdp_current_prices | 0.1891 |
| population_density | 0.1850 |
| geo                | 0.1595 |
| internet_access    | 0.1460 |
| rd_expenditure     | 0.1165 |
| at_risk_of_poverty | 0.0837 |
| hospital_beds      | 0.0685 |
| low_work_intensity | 0.0348 |
| time_period        | 0.0170 |

# Grafinė analizė

## Faktinių ir prognozuotų reikšmių palyginimas

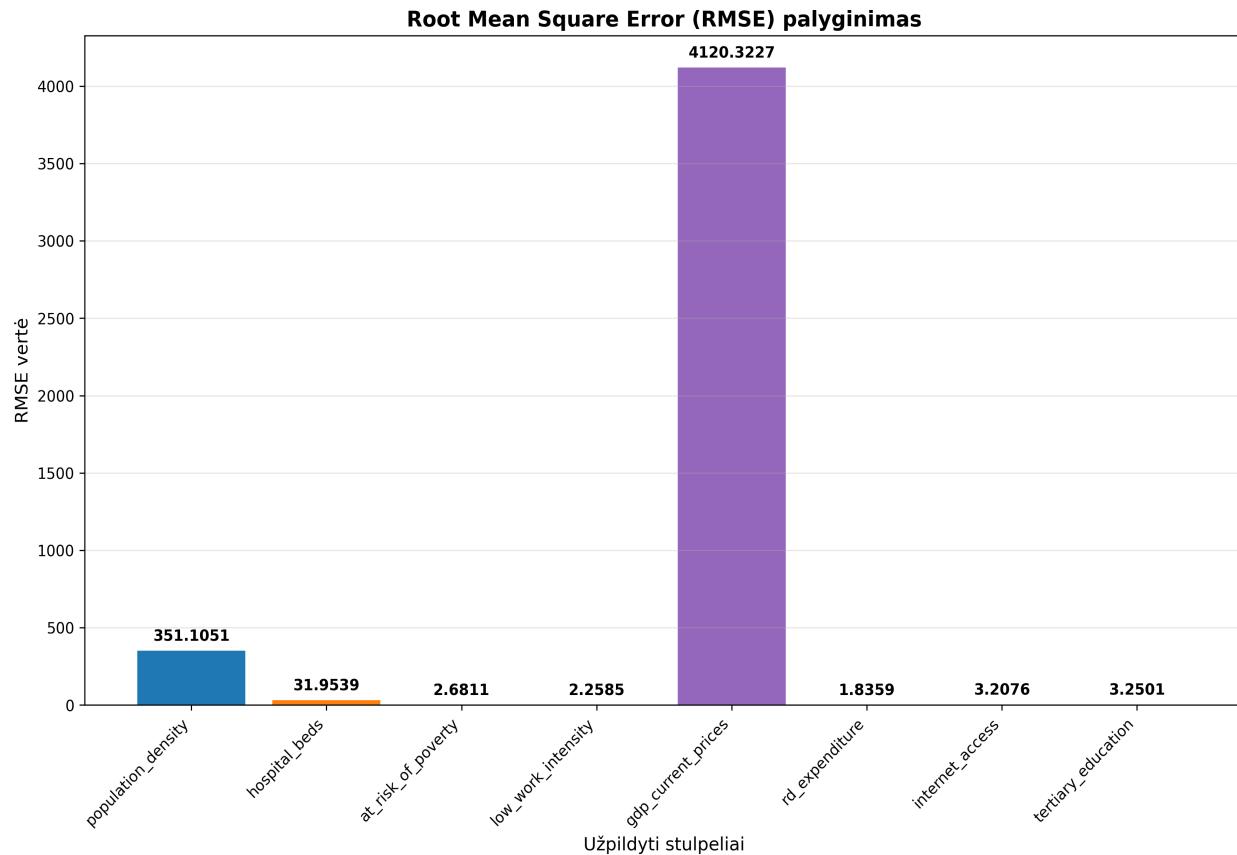


## Modelių efektyvumo lentelė

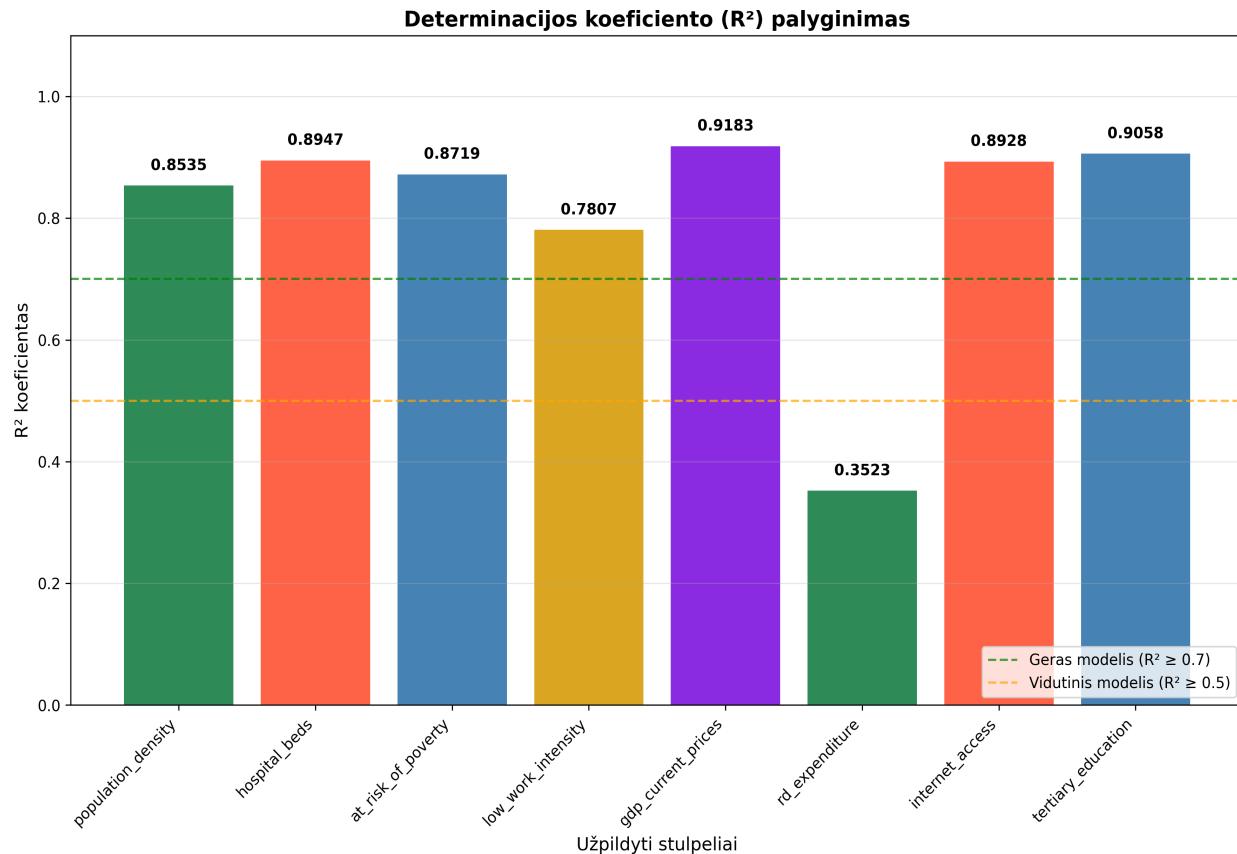
### Modelių efektyvumo vertinimo metrikos

| Stulpelis          | RMSE      | R <sup>2</sup> | MAPE (%) | MAE       | Imties dydis |
|--------------------|-----------|----------------|----------|-----------|--------------|
| population_density | 351.1051  | 0.8535         | 181.34   | 155.5957  | 1401         |
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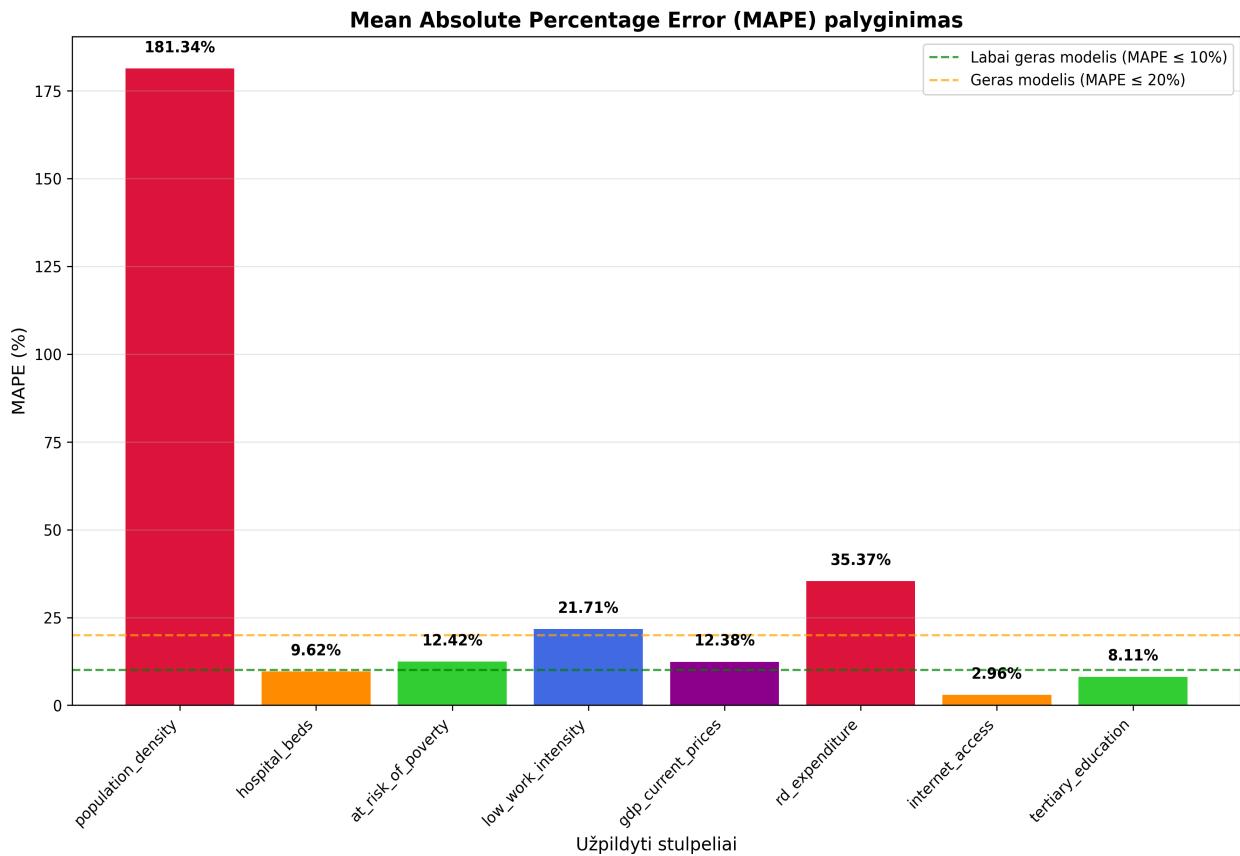
## RMSE palyginimas



## R<sup>2</sup> palyginimas



## MAPE palyginimas



#### Bendrasis modelių palyginimas

