Case 1

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Model type Gaussian

Number of observations: 67

Number of covariates: 3

Global Regression Results

---------------------------------------------------------------------------

Residual sum of squares: 693176.152

Log-likelihood: -404.755

AIC: 815.509

AICc: 818.154

BIC: 692907.052

R2: 0.117

Adj. R2: 0.090

Variable Est. SE t(Est/SE) p-value

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X0 -158.239 207.598 -0.762 0.446

X1 4.349 1.689 2.575 0.010

X2 3.258 2.461 1.324 0.186

Geographically Weighted Regression (GWR) Results

---------------------------------------------------------------------------

Spatial kernel: Adaptive bisquare

Bandwidth used: 27.000

Diagnostic information

---------------------------------------------------------------------------

Residual sum of squares: 92797.445

Effective number of parameters (trace(S)): 18.378

Degree of freedom (n - trace(S)): 48.622

Sigma estimate: 43.687

Log-likelihood: -337.391

AIC: 713.537

AICc: 730.477

BIC: 756.260

R2: 0.882

Adj. alpha (95%): 0.008

Adj. critical t value (95%): 2.728

Summary Statistics For GWR Parameter Estimates

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Variable Mean STD Min Median Max

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X0 93.570 279.576 -381.503 28.700 834.813

X1 2.659 2.653 -2.953 3.622 6.765

X2 1.767 2.162 -3.462 1.863 6.988

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Model type Gaussian

Number of observations: 67

Number of covariates: 3

Global Regression Results

---------------------------------------------------------------------------

Residual sum of squares: 566904.991

Log-likelihood: -398.018

AIC: 802.036

AICc: 804.681

BIC: 566635.891

R2: 0.209

Adj. R2: 0.185

Variable Est. SE t(Est/SE) p-value

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X0 -243.153 170.080 -1.430 0.153

X1 4.996 1.314 3.802 0.000

X2 3.729 1.982 1.882 0.060

Geographically Weighted Regression (GWR) Results

---------------------------------------------------------------------------

Spatial kernel: Adaptive bisquare

Bandwidth used: 21.000

Diagnostic information

---------------------------------------------------------------------------

Residual sum of squares: 61728.148

Effective number of parameters (trace(S)): 22.336

Degree of freedom (n - trace(S)): 44.664

Sigma estimate: 37.176

Log-likelihood: -323.733

AIC: 694.139

AICc: 720.762

BIC: 745.589

R2: 0.914

Adj. alpha (95%): 0.007

Adj. critical t value (95%): 2.799

Summary Statistics For GWR Parameter Estimates

---------------------------------------------------------------------------

Variable Mean STD Min Median Max

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X0 -44.233 172.277 -514.142 -41.107 308.335

X1 3.579 1.140 0.316 3.806 5.523

X2 2.729 2.359 -1.981 2.991 8.031

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Model type Gaussian

Number of observations: 67

Number of covariates: 3

Global Regression Results

---------------------------------------------------------------------------

Residual sum of squares: 781329.386

Log-likelihood: -408.765

AIC: 823.530

AICc: 826.175

BIC: 781060.286

R2: 0.087

Adj. R2: 0.058

Variable Est. SE t(Est/SE) p-value

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X0 -112.640 234.972 -0.479 0.632

X1 3.375 1.777 1.900 0.057

X2 4.452 2.311 1.927 0.054

Geographically Weighted Regression (GWR) Results

---------------------------------------------------------------------------

Spatial kernel: Adaptive bisquare

Bandwidth used: 19.000

Diagnostic information

---------------------------------------------------------------------------

Residual sum of squares: 50750.235

Effective number of parameters (trace(S)): 23.701

Degree of freedom (n - trace(S)): 43.299

Sigma estimate: 34.236

Log-likelihood: -317.173

AIC: 683.749

AICc: 714.494

BIC: 738.208

R2: 0.941

Adj. alpha (95%): 0.006

Adj. critical t value (95%): 2.820

Summary Statistics For GWR Parameter Estimates

---------------------------------------------------------------------------

Variable Mean STD Min Median Max

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X0 39.692 209.593 -527.355 5.641 481.408

X1 2.826 2.248 -3.039 3.647 7.622

X2 2.865 3.223 -3.342 4.101 8.610

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===========================================================================

Model type Gaussian

Number of observations: 66

Number of covariates: 3

Global Regression Results

---------------------------------------------------------------------------

Residual sum of squares: 702869.023

Log-likelihood: -399.668

AIC: 805.336

AICc: 807.992

BIC: 702605.075

R2: 0.018

Adj. R2: -0.013

Variable Est. SE t(Est/SE) p-value

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X0 202.339 227.086 0.891 0.373

X1 1.835 1.912 0.960 0.337

X2 1.103 2.148 0.513 0.608

Geographically Weighted Regression (GWR) Results

---------------------------------------------------------------------------

Spatial kernel: Adaptive bisquare

Bandwidth used: 23.000

Diagnostic information

---------------------------------------------------------------------------

Residual sum of squares: 98191.210

Effective number of parameters (trace(S)): 19.694

Degree of freedom (n - trace(S)): 46.306

Sigma estimate: 46.049

Log-likelihood: -334.716

AIC: 710.820

AICc: 731.086

BIC: 756.133

R2: 0.863

Adj. alpha (95%): 0.008

Adj. critical t value (95%): 2.754

Summary Statistics For GWR Parameter Estimates

---------------------------------------------------------------------------

Variable Mean STD Min Median Max

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X0 118.909 296.670 -555.695 136.759 795.916

X1 2.254 2.820 -3.612 3.023 6.817

X2 2.215 1.913 -0.721 2.075 7.937

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===========================================================================

Model type Gaussian

Number of observations: 66

Number of covariates: 3

Global Regression Results

---------------------------------------------------------------------------

Residual sum of squares: 676366.268

Log-likelihood: -398.400

AIC: 802.799

AICc: 805.455

BIC: 676102.320

R2: 0.138

Adj. R2: 0.110

Variable Est. SE t(Est/SE) p-value

------------------------------- ---------- ---------- ---------- ----------

X0 -116.384 216.054 -0.539 0.590

X1 2.337 1.655 1.412 0.158

X2 6.508 2.126 3.062 0.002

Geographically Weighted Regression (GWR) Results

---------------------------------------------------------------------------

Spatial kernel: Adaptive bisquare

Bandwidth used: 18.000

Diagnostic information

---------------------------------------------------------------------------

Residual sum of squares: 45674.420

Effective number of parameters (trace(S)): 24.753

Degree of freedom (n - trace(S)): 41.247

Sigma estimate: 33.277

Log-likelihood: -309.458

AIC: 670.421

AICc: 705.529

BIC: 726.810

R2: 0.942

Adj. alpha (95%): 0.006

Adj. critical t value (95%): 2.837

Summary Statistics For GWR Parameter Estimates

---------------------------------------------------------------------------

Variable Mean STD Min Median Max

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X0 -74.427 289.039 -760.101 -39.396 531.584

X1 3.142 1.968 -3.016 3.757 7.088

X2 4.242 3.385 -2.474 4.587 13.744

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Model type Gaussian

Number of observations: 333

Number of covariates: 3

Global Regression Results

---------------------------------------------------------------------------

Residual sum of squares: 676366.268

Log-likelihood: -398.400

AIC: 802.799

AICc: 805.455

BIC: 676102.320

R2: 0.138

Adj. R2: 0.110

Variable Est. SE t(Est/SE) p-value

------------------------------- ---------- ---------- ---------- ----------

X0 -116.384 216.054 -0.539 0.590

X1 2.337 1.655 1.412 0.158

X2 6.508 2.126 3.062 0.002

Spatiotemporal Weighted Regression (STWR) Results

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Spatial kernel: Adaptive spt\_bisquare

Model sita used: 0.000

Model alpha used: 0.040

Init Bandwidth used: 5.000

Model Ticktimes used: 5.000

Model Ticktimes Intervels: 5.030

Diagnostic information

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Residual sum of squares: 5752.849

Effective number of parameters (trace(S)): 20.748

Degree of freedom (n - trace(S)): 312.252

Sigma estimate: 4.292

Log-likelihood: -241.087

AIC: 525.671

AICc: 528.860

BIC: 608.492

R2: 0.993

Adj. alpha (95%): 0.007

Adj. critical t value (95%): 2.703

Summary Statistics For STWR Parameter Estimates

---------------------------------------------------------------------------

Variable Mean STD Min Median Max

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X0 32.931 134.789 -409.733 23.920 470.054

X1 2.753 1.543 -1.718 2.923 6.631

X2 2.697 1.701 -0.844 2.404 5.978

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