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## Spatial Statistics in C# using Open Source Tools

The application presented in this demo is the result of work completed for a graduate course on spatial statistics at Wilfrid Laurier University. It was developed using the SharpDevelop IDE for programming applications in VB.Net and C#. The Npgsql is used to connect to PostGIS-enabled PostgreSQL databases, which provides the functionality for storing and processing spatial data. The application provides two variations of spatial cluster analysis for point datasets, which are accomplished by prompting the user for options, then executing functions that use SQL queries in the PostGIS database to obtain results of the analysis. The spatial data and analysis results are displayed in map form using the C# MapScript library for MapServer. The goal of this demo is to present an example of the advanced spatial applications that novice/intermediate programmers can produce with open source resources.

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