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Collana	Quick answers to common problems
Altri autori (Persone)	MatherStephen Vincent KraftThomas J ParkBborie
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Nota di contenuto	Cover; Copyright; Credits; About the Authors; About the Reviewers; www.PacktPub.com; Table of Contents; Preface; Chapter 1: Moving Data In and Out of PostGIS; Introduction; Importing nonspatial tabular data (CSV) using PostGIS functions; Importing nonspatial tabular data (CSV) using GDAL; Importing shapefiles with shp2pgsql; Importing and exporting data with the ogr2ogr GDAL command; Handling batch importing and exporting of datasets; Exporting data to the shapefile with the pgsql2shp PostGIS command; Importing OpenStreetMap data with the osm2pgsql command Importing raster data with the raster2pgsql PostGIS commandImporting multiple rasters at a time; Exporting rasters with the gdal_translate and gdalwarp GDAL commands; Chapter 2: Structures that Work; Introduction; Using geospatial views; Using triggers to populate a geometry column; Structuring spatial data with table inheritance; Extending inheritance - table partitioning; Normalizing imports; Normalizing internal overlays; Using polygon overlays for proportional census estimates; Chapter 3: Working with Vector Data - The Basics; Introduction; Working with GPS data; Fixing invalid geometries GIS analysis with spatial joinsSimplifying geometries; Measuring distances; Merging polygons using a common attribute; Computing

intersections; Clipping geometries to deploy data; Simplifying geometries with PostGIS topology; Chapter 4: Working with Vector Data - Advanced Recipes; Introduction; Improving proximity filtering with KNN; Improving proximity filtering with KNN - advanced; Rotating geometries; Improving ST_Polygonize; Translating, scaling, and rotating geometries - advanced; Detailed building footprints from LiDAR; Using external scripts to embed new
functionality in order to calculate a Voronoi diagramUsing external scripts to embed other; libraries in order to calculate a Voronoi; diagram - advanced; Chapter 5: Working with Raster Data; Introduction; Getting and loading rasters; Working with basic raster information and analysis; Performing simple map-algebra operations; Combining geometries with rasters for analysis; Converting between rasters and geometries; Processing and loading rasters with GDAL VRT; Warping and resampling rasters; Performing advanced map-algebra operations; Executing DEM operations
Sharing and visualizing rasters through SQLChapter 6: Working with pgRouting; Introduction; Startup - Dijkstra routing; Loading data from OpenStreetMap and finding the shortest path using A*; Driving distance/service area calculation; Calculating the driving distance with demographics; Extracting the centerlines of polygons; Chapter 7: Into the Nth Dimension; Introduction; Importing LiDAR Data; Performing 3D queries on a LiDAR point cloud; Constructing and serving buildings 2.5 D; Using ST_Extrude to extrude building footprints; Creating arbitrary 3D objects for PostGIS
Exporting models as X3D for the Web

Sommario/riassunto

An easy-to-use guide, full of hands-on recipes for manipulating spatial data in a PostGIS database. Each topic is explained and placed in context, and for the more inquisitive, there are more details of the concepts used.If you are a web developer or a software architect, especially in location-based companies, and want to expand the range of techniques you are using with PostGIS, then this book is for you. You should have some prior experience with PostgreSQL database and spatial concepts.