International Conference for Free and Open Source Software for Geospatial (FOSS4G 2017)

OSGeo Journal Volume 17, Issue 1

Boston, Massachusetts, USA 14-19 August 2017

Editors:

Charles M. Schweik Mohammed Zia Andy Anderson

ISBN: 978-1-7138-1903-5

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 3.0 International License. License details: https://creativecommons.org/licenses/by-nd/3.0/.

No changes have been made to the content of these proceedings. There may be changes to pagination, and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2020)

For permission requests, please contact OSGeo at the address below.

OSGeo 9450 SW Gemini Dr. #42523 Beaverton, Oregon United States 97008

www.osgeo.org

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA

Phone: 845-758-0400 Fax: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

Contents

| L | PAI | PERS | 5 |
|---|-----------|---|----------|
| | 1.1 | Analyzing the performance of NoSQL vs. SQL databases for Spatial and Aggre- | |
| | | gate queries | 6 |
| | 1.2 | A New Spatial Approach for Efficient Transformation of Equality - Generalized | |
| | 4.0 | | 15 |
| | 1.3 | | 23 |
| | 1.4 | Exploring the Relationship Between Climate and Forest Conditions in Forest | 25 |
| | 1 5 | () | 35 |
| | 1.5 | Facilitate Visualization and Distribution of NASA's Environmental Science Data through Open Standards and Open Source Software for Geospatial | 41 |
| | 1.6 | | 41 57 |
| | 1.0 1.7 | | 69 |
| | 1.8 | Open Geoportal lands to Europe: use cases and improvements from | UÐ |
| | 1.0 | | 77 |
| | 1.9 | Optimizing Spatiotemporal Analysis using Multidimensional Indexing with Ge- | ٠. |
| | 1.0 | | 86 |
| | 1.10 | | 95 |
| | | Processing Conservation Indicators with Open Source Tools: Lessons Learned | |
| | | from the Digital Observatory for Protected Areas | 01 |
| | 1.12 | The Billion Object Platform: A System to Lower Barriers to Big, Streaming, | |
| | | Spatio-Temporal Data Sources | 12 |
| | 1.13 | Towards a Web-Enabled Geo-Sample Web: An Open Source Resource Registra- | |
| | | tion and Management System for Connecting Geo-Samples to the Web 1 | 23 |
| | 1.14 | Towards OSGeo Best Practices for Scientific Software Citation: Integration Op- | |
| | | tions for Persistent Identifiers fn OSGeo Project Repositories | 35 |
| | 1.15 | Tracking 19 th Century Late Blight from Archival Documents using Text Analytics | |
| | | and Geoparsing | |
| | | The Utility of Beautiful Visualizations | 56 |
| | 1.17 | Urban Multi-scale Environmental Predictor - an extensive tool for climate ser- | 00 |
| | | vices in urban areas | 03 |
| 2 | POS | STERS 17 | 71 |
| | 2.1 | Evaluation of the Micro-Tasking Method for OpenStreetMap Imports 1 | 72 |
| | 2.2 | GIS Investigation of Crime Prediction with an Operationalized Tweet Corpus 1 | 74 |
| | 2.3 | Hyperlocal: Using sensors to study public space | 76 |
| | 2.4 | Kadaster Data Platform - Overview Archicture | 78 |
| | 2.5 | Open Source and Open Learning | 80 |
| | 2.6 | Optimum Object Analysis Of Islands Activities On South China Sea By DNB | |
| | | On VIIRS | |
| | 2.7 | Supporting Trajectory UDF Queries and Indexes on PostGIS | |
| | 2.8 | The Development of Japanese City's Future Simulation System: My City Forecast 1 | 86 |
| | 2.9 | Using OSGeo solutions for local development systems implementation. The ex- | |
| | | perience for the Northern Region of Costa Rica | 88 |