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Rebalancing Citibike

Urbica - April 2016

Visualization of Master's coursework in Geospatial Technologies using Mapbox GL and D3. This study analyzes over 10 million trips taken in New York City between 2012-15 and focuses on a few of the most intractable problems that any robust bikeshare network faces: rebalancing stations so that they are neither full nor empty, and bike availability.

Circle of Life

National Geographic (Russian Issue) – June 2016

This article focused on the reindeer migration in the Taimyr Peninsula. Migration is a difficult task. Behind every new migration cycle there are new obstacles: turbulent rivers, inclement weather, and predators. Far more dangerous, however, is for reindeer to stop moving. These roamers of the north have been able to outlive their contemporaries – mammoths and woolly rhinoceros – in large part due to their constant movement.

Erasmus Mundus Association

Freelance consulting – December 2016

Created a database of Erasmus Mundus graduate courses and locations. Developed a basic search application in Mapbox for prospective students.

Social Bicycles

Freelance consulting – December 2016

Trip data from July and November 2016 in Hamilton, Ontario were compared in order to understand changes in ridership patterns. The following research takes into consideration the number of trips that looked like daily commutes vs. leisure, most active and frequently paired hubs, and compares details such as average distance, duration, and areas through which riders pass. A visualization of patterns between those two months was created in Mapbox.

Imperiia

Harvard University, Department of History – 2012 – present

A historical geographic information system to promote the study of Russia's spatial history. The research project, directed by Dr. Kelly O'Neill at Harvard University, makes available a series of annotated datasets and historical maps related to the physical infrastructure, demographics, culture, and economy of the tsarist state.

Topography of Terror

NextGIS and Memorial – August 2014

Everyday, residents of Moscow walk about their city without really knowing its past. Buildings pass by one after another, but concealed within is a dark history. Nested within the urban space are execution sites, concentration camps, burial holes, barracks, and prisons where thousands of victims met their demise. *Topography of Terror* serves to inform people today – whether amateur historians, victims' relatives, or simply citizens who want to know the truth – by mapping the locations of sites associated with state repression.

Using R to Map Crime Density in Boston

New University of Lisbon, Nova School of Information Management– February 2015

As a social phenomenon, crime has intrinsic geographic qualities. At the beginning of the 2000s, the city of Boston experienced a significant uptick in crime rates relative to the previous decade. The current study serves to both update and supplement the geographical component of crime analysis in Boston by making use of the demographic data from the 2010 U.S. Census and a comprehensive crime incident database.

Shrinking of Lake Urmia, Iran

New University of Lisbon, Nova School of Information Management– December 2014

At its full extent, Lake Urmia is the sixth largest saltwater lake on earth with a surface of approximately 5,200 km². The lake has been rapidly shrinking for the past several decades due to drought, climate change, and poor water resource management. This objective of this study is to determine the extent of land cover change in the last three decades.

Lisbon Wheelchair Accessibility

New University of Lisbon, Nova School of Information Management– October 2014

Web map created using ArcGIS Online displays the wheelchair accessibility of metro and tram stations in Lisbon, in addition to popular tourist sites.