

# ALEXANDER TEDESCHI

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## EDUCATION

### **M.Sc., Geospatial Technologies, Universidade Nova de Lisboa, 2016**

Concentration: Geospatial data mining, Clustering algorithms

Thesis: *Rebalancing Citi Bike: Mapping bike share redistribution in New York*

Thesis Advisors: Roberto Henriques, Ph.D., Edzer Pebesma, Ph.D., Mateu Jorge, Ph.D.

### **M.A., Regional Studies of Russia, Eastern Europe, and Central Asia Harvard University, 2013**

Concentrations: Quantitative Political Science, GIS, Sociology of the Post-Soviet sphere

Thesis: *Nation-building in Contemporary Russia*

Thesis Advisor: Laura Adams, Ph.D.

### **B.A, Global Studies, History, St. Lawrence University, 2008**

Danish Institute for Study Abroad (DIS), Copenhagen, Denmark, 2006

Thesis: *Muslims in the West: Dominant Discourses from the European Perspective.*

Thesis Advisor: John Collins, Ph.D.

## RELEVANT SKILLS

**Programming:** Proficiency in Python, R, SQL, NoSQL, Javascript, Git

**Applications:** Proficiency with open-source & proprietary GIS frameworks (GDAL, GRASS, QGIS, ArcGIS, Mapbox Studio), PostgreSQL + PostGIS, Docker, Airflow, Scikit-learn, PyTorch, TensorFlow, Jupyter, RStudio, PgAdmin, Django

**Languages:** Russian (Fluent); German (Advanced); Ukrainian (basic); French (basic)

## WORK EXPERIENCE

### **Data Science Engineer, Cornell Lab of Ornithology, 04/2023 - present**

Lead the development of R, Python, C libraries for bioRad and BirdCast, a open-source suite of scientific tools used to predict the migration patterns of migratory bird species. Design and implement robust cloud-based data pipelines in AWS to facilitate efficient radar data ingestion, processing, and analytics.

### **Senior Data Scientist, Rystad Energy, 12/2020 - 04/2023**

Engineered data pipelines in Airflow for large-scale processing of raw maritime AIS data. Responsible for end-to-end development of 3 products designed to decipher vessel activity. Led and trained 5 junior data scientists in the development of microservices for maritime vessel tracking and analysis.

### **Data Scientist II, Uber Technologies, 03/2019 - 06/2020**

Designed and executed controlled experiments in the Uber app. Extracted actionable insights from millions of rows of IoT data to improve user experience and vehicle reliability. Built time-series models to anticipate supply and demand. Wrote ETL pipelines in Python to improve data analysis and synchronization.

### **Data Scientist, Uber Technologies, 07/2018 - 03/2019**

Built automated reporting tools and APIs for data compliance with departments of transportation in 10+ cities. Tested and deployed supply/demand predictive models. Led the migration of JUMP databases into the Uber ecosystem. Developed dashboards to monitor performance and trained 10 junior staff members.

### **GIS Developer, JUMP Bikes, 01/2017- 07/2018**

Developed real-time geospatial applications for field operations using the Django framework and led data reporting for compliance. Analyzed trip data, commuting patterns, and created data visualizations for business development purposes. Trained 2 junior staff members.

**GIS Analyst, Strelka KB, 09/2015 - 07/2016**

Managed the storage and processing of geodata for *MyStreet*, a large-scale urban renewal project in Moscow. Managed and mentored a team of interns to create workflows for processing, storing, and analyzing urban spatial data using Python and PostGIS. Conducted GIS training sessions for colleagues.

**Contributing Researcher, Urbica, 12/2015-06/2018**

Analyzed commuter data from the Moscow department of transportation, built interactive visualizations using d3 and Mapbox GL JS, contributed to R&D and translation on a variety of urban data projects

**GIS Intern, NextGIS, 07/2014 - 12/2014**

Geocoded over 10 thousand historical addresses of gulag victims using databases of old and new street names. Provided consultation to the Russian human rights NGO Memorial on GIS.

**Research Assistant, Harvard Center for Geographic Analysis, 09/2013-05/2014**

In collaboration with Prof Kelly O'Neill, developed a geospatial network model of transportation in the Russian Empire by integrating historical sources with GIS software

**Resident Director, American Councils for International Education, 05/2013-08/2013**

Administered the State Department's Critical Language Scholarship Program in Kazan, Russia

**RESEARCH EXPERIENCE**

**Fulbright Scholarship, Kazan Federal University, 2008-2009**

Project: "Investigating the Islamic Revival in post-Soviet Russia through the Muslim Press"

- Intensively studied the Russian language for 20 hours per week
- Surveyed 100 students at the Russian Islamic University about religiosity and periodical preference
- Conducted interviews with representatives of Islamic publishing houses

**Boren Fellowship, Kazan Federal University, 07/2011-07/2012**

Thesis Research: "Negotiating National Identity in Russia"

- Surveyed public opinion of various social groups about moral education in Russian schools
- Carried out semi-structured interviews with 25 local political and religious figures
- Presented results of fieldwork to a panel of ethnographers at the Russian Academy of Sciences

**VOLUNTEERING**

**Red Cross, Remote, 2020 - present**

OpenStreetMap (OSM) Data Quality Volunteer

**Data Science Retreat (DSR), Berlin, 2019**

Taught 2-day course on core concepts in Geospatial Data Science

**GRANTS AND FELLOWSHIPS**

- Alfa Fellowship, Moscow, (Cultural Vistas, 2015-2016)
- Erasmus Mundus Scholarship EMJMD (European Commission, 2014-2016)
- USGIS Graduate Scholarship (US Geospatial Intelligence Foundation, 2014)
- Boren Fellowship, Kazan Federal University (US Department of State, 2011-2012)
- Foreign Language and Area Studies Fellowship (US Department of Education, 2010-11, 2012-13)
- Fulbright Scholarship, Kazan Federal University (US Department of State, 2008-2009)
- 100 Projects for Peace (Kathryn Wasserman Davis Foundation, 2007)