DATA SCIENCE FOR MIGRATION AND MOBILITY

Edited by
ALBERT A. SALAH, EMRE E. KORKMAZ,
AND TUBA BIRCAN

Published for THE BRITISH ACADEMY by OXFORD UNIVERSITY PRESS

Contents

	List of Figures	X
	Colour Plates	xiii
	List of Tables	xxi
	Notes on Contributors	xxii
	Preface	xxxii
Pa	rt I: Introduction	1
1	New Data Sources and Computational Approaches to Migration and Human Mobility	3
	ALBERT ALI SALAH, TUBA BIRCAN, AND EMRE EREN KORKMAZ	
2	Ethical and Legal Concerns on Data Science for Large-Scale Human Mobility	24
	albert alı salah, cansu canca, and barış erman	
Pa	rt II: Data Sources	49
3	CESSDA Data Catalogue: Opportunities and Challenges to Explore Mobility and Migration DIMITRA KONDYLI, RON DEKKER, AND IVANA ILIJASIC VERSIC	51
4	Leveraging Mobile Phone Data for Migration Flows MASSIMILIANO LUCA, GIANNI BARLACCHI, NURIA OLIVER, AND BRUNO LEPRI	71
5	Analysing Refugees' Secondary Mobility Using Mobile Phone Call Detail Records HARALD STERLY AND LARS WIRKUS	94
6	Remote Sensing Data for Migration Research TUBA BIRCAN	115
7	Using Facebook and LinkedIn Data to Study International Mobility CAROLINA COIMBRA VIEIRA, MASOOMALI FATEHKIA, KIRAN GARIMELLA,	141

viii Contents

8	Twitter Data for Migration Studies JISU KIM, LAURA POLLACCI, GIULIO ROSSETTI, ALINA SÎRBU, FOSCA GIANNOTTI, AND DINO PEDRESCHI	159
9	Indicators and Survey Data to Understand Migration and Integration Policy Frameworks and Trends in the EU GIACOMO SOLANO	183
10	Financial Datasets: Leveraging Transactional Big Data in Mobility and Migration Studies MERT GÜRKAN, BURÇIN BOZKAYA, AND SELIM BALCISOY	211
Paı	rt III: Visualisation	239
11	Visual Exploration of Large Multidimensional Trajectory Data ALEXANDRU TELEA AND MICHAEL BEHRISCH	241
12	Voyage Viewer: A Multivariate Visualisation Tool for Migration Analysis ISABELLA LOAIZA, GERMÁN SÁNCHEZ, SERENA CHAN, FELIPE MONTES JIMÉNEZ, MOHSEN BAHRAMI, AND ALEX PENTLAND	267
Pa	rt IV: Case Studies and Applications	289
13	Combining Mobile Call Data and Satellite Imaging for Human Mobility TUĞBA BOZCAGA AND ASLI CANSUNAR	291
14	Using Machine Learning and Synthetic Populations to Predict Support for Refugees and Asylum Seekers in European Regions CARLOS ARCILA-CALDERÓN, JAVIER J. AMORES, AND MIKOLAJ STANEK	310
15	Issues about Analysing Multilingual Communication in Immigrant Contexts A. SEZA DOĞRUÖZ	336
16	Applying Computational Linguistic and Text Analysis to Media Content about Migration WILLIAM L. ALLEN	352
17	Exploring Digital Connectivities in Forced Migration Contexts: 'Digital Making-Do' Practices AMANDA ALENCAR AND MARIE GODIN	366

	Contents	ix
18	Conflict and Forced Migration: Social Media as Event Data H. AKIN UNVER AND AHMET KURNAZ	383
Part V: A Final Word		403
19	Eight Theses on Migration Studies and Big Data EMRE EREN KORKMAZ	405
	Glossary	419
	Index	423