CONTENTS

Introduction How to use this book	ix xiii
PART 1: EDUCATORS	1
GIS project helps with food insecurity and waste Palomar College	3
Mapping for equity and environmental justice Equity Research Institute, University of Southern California	8
Building a geospatial legacy Swiss Federal Institute of Technology	12
Students map ingenious route to clean water Saaf water	18
Students see opportunities for community growth Penn State University	23
Making GIS a statewide initiative West Virginia Department of Education	28
High school helps students expand their analytic capabilities Loudoun Valley High School	31
PART 2: RESEARCHERS	39
Serious game play Rochester Institute of Technology	41
Communities see how land-use changes may affect local water quality Tipping Point Planner Program	49

Evaluating tobacco use on a tobacco-free campus University of South Carolina	56
Geospatial brainpower: Research on spatial reasoning The Geospatial Semester at James Madison University	60
GIS and ancient trees reveal past temperatures and climate change University of Arizona's Laboratory of Tree-Ring Research and Western Washington University	67
Mapping pikas' habitat to help save them Nevada Department of Wildlife; University of Nevada, Reno; and San José State University	73
PART 3: IT SUPPORT	79
University inspires campus-wide GIS use Clemson Center for Geospatial Technologies	81
University makes GIS accessible across campus University of California San Diego	89
Mapping without boundaries: GIS reaches across university and beyond Colorado State University	93
Scaling up GIS across campus University of Michigan	99
University empowers campus-wide GIS HAS University of Applied Sciences	102

107

PART 4: ADMINISTRATORS

NEXT STEPS	148
Crowdsourcing a university's facilities mapping Washington State University	142
It's in the wastewater: Sensing and mapping COVID-19 University of California San Diego	137
GIS improves estate management University of Cambridge	133
New university campus incorporates GIS from the outset Sabah Al-Salem University City—Kuwait University	128
University uses GIS to rethink campus litter management Michigan State University	120
Online schooling prompts municipalities to map digital inequities Philadelphia and Palm Beach School Districts	114
School district integrates CAD and GIS for planning Albuquerque Public Schools	109

Contributors

155