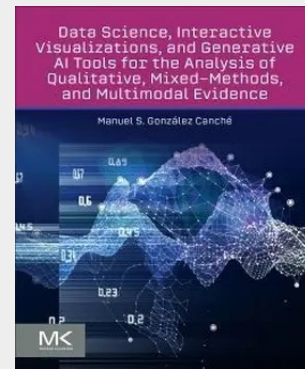


Data Science and Interactive Visualization Tools for the Analysis of Qualitative Evidence

Too many qualitative and mixed-methods researchers are currently being asked to make an impossible choice: either remain outside the world of advanced data science and artificial intelligence, or enter it by learning programming, relying on expensive proprietary platforms, and uploading sensitive data to external servers. This book begins from a different premise: researchers should not have to choose between rigor, accessibility, privacy, and interpretive depth. Data Science, Interactive Visualizations, and Generative AI Tools for the Analysis of Qualitative, Mixed-Methods, and Multimodal Evidence presents an integrated methodological ecosystem for ethical and equity-driven data science in qualitative and mixed-methods research. It is designed for scholars working with textual, relational, temporal, affective, spatial, visual, and multimodal evidence who want access to rigorous data science and AI-supported analytic tools without needing to master programming, pay recurring fees, or surrender control of sensitive materials. The book introduces a fully local, no-code ecosystem of software tools for analyzing complex evidence across multiple layers of inquiry—from language and structure to time, emotion, interaction, and context. Special attention is given to ISARI (Intelligent Systems for Academic Research Integration), a fully offline, open-source, multimodal brainstorming partner designed to support scholarly memoing, comparison, synthesis, and evidence-grounded writing. ISARI is presented not as a substitute for interpretation, but as part of a broader local analytic environment in which computational outputs remain accountable to researchers' judgment and to participants' original evidence. This is not a book about replacing researchers with AI. It is a book about giving researchers ethical, privacy-conscious, and equity-driven access to advanced analytic tools that have too often remained restricted to those with programming expertise or privileged institutional support. By bringing together interactive visualizations, machine learning, natural language processing, geocontextualization, temporal analysis, relational modeling, and local generative AI, this book offers a practical and forward-looking vision for doing rigorous research without compromising transparency, scholarly control, or data sovereignty. It is intended for researchers, faculty, graduate students, institutional analysts, and interdisciplinary scholars interested in expanding their analytic toolkit while preserving methodological accountability and interpretive authority.

Data Science and Interactive Visualization Tools for the Analysis of Qualitative Evidence empowers qualitative and mixed methods researchers in the data science movement by offering no-code, cost-free software access so that they can apply cutting-edge and innovative methods to synthesize qualitative data. The book builds on the idea that qualitative and mixed methods researchers should not have to learn to code to benefit from rigorous open-source, cost-free software that uses artificial intelligence, machine learning, and data visualization tools—just as people do not need to know C++ or TypeScript to benefit from Microsoft Word. The real barrier is the hundreds of R code lines required to apply these concepts to their databases. By removing the coding proficiency hurdle, this book will empower their research endeavors and help them become active members of and contributors to the applied data science community. The book offers a comprehensive explanation of data science and machine learning methodologies, along with access to software application tools to implement these techniques without any coding proficiency. The book addresses the need for innovative tools that enable researchers to tap into the insights that come out of cutting-edge data science tools with absolutely no computer language literacy requirements.



137,50 €

137,50 € (zzgl. MwSt.)

vorbestellbar, Erscheinungstermin ca. Juni 2026

Artikelnummer: 9780443219610

Medium: Buch

ISBN: 978-0-443-21961-0

Verlag: Elsevier Science

Erscheinungstermin: 26.06.2026

Sprache(n): Englisch

Auflage: Erscheinungsjahr 2026

Produktform: Kartoniert

Gewicht: 450 g

Seiten: 250

Format (B x H): 191 x 235 mm

