



Visual Analytics for Dashboards

A Step-by-Step Guide to Principles and Practical Techniques

—
Arshad Khan

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About the Author

Arshad Khan is a versatile business intelligence/analytics and training professional, with 35+ years of experience, who has led many Tableau and SAP projects. He has consulted for Accenture, PwC, Deloitte, Chevron, Bose Corporation, Daimler Chrysler, Genentech, PepsiCo, Hitachi America, and many other blue-chip companies.

Khan has authored 17 books including six on business intelligence. He has taught many data visualization, dashboards, data analysis, BI, and SAP courses at nine universities including Golden Gate University, Santa Clara University, and the University of California (Berkeley, Santa Cruz/Silicon Valley, and San Diego Extensions). Khan has a graduate degree in chemical engineering and an MBA.

About the Technical Reviewer



Massimo Nardone is a seasoned cyber, information, and operational technology (OT) security professional with 28 years of experience working with IBM, HP, and Cognizant, among others, with IT, OT, IoT, and IIoT security roles and responsibilities including CISO, BISO, IT/OT/IoT Security Architect, Security Assessor/Auditor, PCI QSA, and ICS/SCADA Expert. He is the founder of Massimo Security Services, a company providing IT-OT-IoT Security Consulting Services, and a member of ISACA, ISE, Nordic CISO Forum, and Android Global Forum and owns four international patents. He is the coauthor of five Apress IT books.

Preface

Welcome to the world of *Visual Analytics for Dashboards*, where data meets design and insights come alive. In this rapidly evolving era of information overload, the ability to transform complex data into meaningful visual representations has become an indispensable skill for individuals and organizations alike. In this book, we embark on a journey to explore the art and science of visual analytics, with a specific focus on creating compelling dashboards.

The power of information lies not just in the abundance of data but in your ability to extract valuable insight from it. Visual analytics serves as your bridge between raw data and actionable knowledge, enabling you to gain a deeper understanding of trends, patterns, and relationships. Dashboards, in turn, act as a canvas where these insights are presented, facilitating informed decision-making, driving business growth, and fueling innovation.

As the demand for effective data communication grows, so does the need for skilled individuals who can transform complex information into visually appealing and intuitive dashboards. *Visual Analytics for Dashboards* is designed to cater to a wide range of readers, from beginners looking to grasp the fundamentals of visual analytics to seasoned professionals seeking to enhance their dashboard design skills. Whether you are a data analyst, business intelligence professional, data scientist, or simply someone interested in data visualization, this book aims to equip you with the knowledge and tools necessary to create impactful dashboards.

In *Visual Analytics for Dashboards*, we will delve into the key principles, best practices, and practical techniques for designing and implementing visually compelling dashboards. We will explore the various stages of the dashboard development process, from understanding user needs and defining goals to selecting appropriate visual encodings, designing effective layouts, and employing interactive elements.

It is important to note that while this book aims to provide comprehensive insights into the world of visual analytics for dashboards, the field is continuously evolving. New tools, techniques, and research emerge regularly, and it is our hope that this book will serve as a solid foundation for your journey into visual analytics, sparking your curiosity and encouraging you to explore further.

PREFACE

Our goal is to empower you with the knowledge and skills to create dashboards that not only present data effectively but also inspire action and drive positive outcomes. We believe that visual analytics is a powerful tool that can transform how we understand and interact with data, leading to informed decision-making and fostering a data-driven culture.

So, let us embark on this adventure together, as we dive into the exciting realm of *Visual Analytics for Dashboards*. May this book serve as a guide, unlocking the potential of your data and helping you create visually stunning and impactful dashboards that make a difference.

Happy exploring!
Arshad Khan