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Big Data

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- Use predictive analytics to make better decisions

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Dedication

Judith dedicates this book to her husband, Warren, her children, Sara and David, and her mother, Elaine. She also dedicates this book in memory of her father, David.

Alan dedicates this book to his wife Jane for all her love and support; his three children Chris, Jeff, and Greg; and the memory of his parents who started him on this journey.

Fern dedicates this book to her husband, Clay, daughters, Katie and Lindsay, and her sister Adrienne.

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Introduction

Welcome to *Big Data For Dummies.* Big data is becoming one of the most important technology trends that has the potential for dramatically changing the way organizations use information to enhance the customer experience and transform their business models. How does a company go about using data to the best advantage? What does it mean to transform massive amounts of data into knowledge? In this book, we provide you with insights into how technology transitions in software, hardware, and delivery models are changing the way that data can be used in new ways.

Big data is not a single market. Rather, it is a combination of data-management technologies that have evolved over time. Big data enables organizations to store, manage, and manipulate vast amounts of data at the right speed and at the right time to gain the right insights. The key to understanding big data is that data has to be managed so that it can meet the business requirement a given solution is designed to support. Most companies are at an early stage with their big data journey. Many companies are experimenting with techniques that allow them to collect massive amounts of data to determine whether hidden patterns exist within that data that might be an early indication of an important change. Some data may indicate that customer buying patterns are changing or that new elements are in the business that need to be addressed before it is too late.

As companies begin to evaluate new types of big data solutions, many new opportunities will unfold. For example, manufacturing companies may be able to monitor data coming from machine sensors to determine