## Contents

### Assignment 1
Exploring Big Data Analytics 1.1
- Big Data and Technology—The Future of Insurance 1.3
- Big Data Characteristics and Sources 1.8
- Data Quality 1.13
- Data Mining 1.17
- Data Science 1.23
- Data-Driven Decision Making 1.26
- Summary 1.31

### Assignment 2
Predictive Modeling Concepts 2.1
- Basic Modeling Concepts 2.3
- Similarity and Distance 2.8
- Training and Evaluating a Predictive Model 2.12
- Summary 2.18

### Assignment 3
Big Data Analysis Techniques 3.1
- Overview of Big Data Analysis Techniques 3.3
- Classification Trees 3.11
- Linear Functions 3.16
- Cluster Analysis 3.21
- Text Mining 3.26
- Social Network Analysis 3.31
- Neural Networks 3.37
- Summary 3.40

### Assignment 4
Underwriting Applications of Big Data Analytics 4.1
- Automobile Ratemaking Using Vehicle Telematics 4.3
- Segmenting Homeowners Policies Using Machine Learning 4.8
- Underwriting Products Liability Risks Using Data Mining 4.13
- Summary 4.17

### Assignment 5
Claims Applications of Big Data Analytics 5.1
- Detecting Claims Fraud With Network Analysis and Clustering 5.3
- Using Classification Tree Analysis in Claims Assignment 5.7
- Improving Claims Processes With Business Process Analytics 5.13
- Summary 5.18

### Assignment 6
Risk Management Applications of Big Data Analytics 6.1
- Preventing Employee Injuries With Sensor Data 6.3
- Assessing Reputation Risk Through Text Mining and Social Network Analysis 6.9
- Using Clustering and Linear Modeling for Loss Development 6.14
- Summary 6.17
<table>
<thead>
<tr>
<th>Assignment 7</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementing a Data Analytics Strategy</td>
<td>7.1</td>
</tr>
<tr>
<td>Data Analytics Strategy</td>
<td>7.3</td>
</tr>
<tr>
<td>Data Analytics Risk Management</td>
<td>7.9</td>
</tr>
<tr>
<td>Data Analytics Change</td>
<td>7.14</td>
</tr>
<tr>
<td>Management</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td>7.18</td>
</tr>
</tbody>
</table>

Index  
1