BOOK REVIEW
Model-Driven Software Engineering in Practice

Marco Brambilla, Jordi Cabot, Manuel Wimmer. Morgan Claypool, 2012
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Model based software development differs from the conventional software development process and used in conjunction with a range of agile techniques. Despite improvements in third generation programming languages and runtime platforms, the levels of abstraction at which PLAs are developed today remains low-level relative to the concepts and concerns within the application domains themselves, such as manually tracking the library dependency or ensuring component composition syntactical and semantic correctness. [1] A promising means to address this problem involves developing PLAs using *model-driven engineering* (MDE) [2] which involves systematic use of models as key design and implementation artifacts throughout the software lifecycle. Thus to induce the works on architectures and models, researchers have been working to create structured models. The literature in this area hence proliferates; where the current edition [3] tries to address some of the significant aspects.

This book is structured with 11 chapters written not much comprehensively, but with a focus on basic as well as practice aspects. The chapter one is the overview of the contents of the book followed by a chapter on principles of MDSE wherein the authors have presented a discussion on classification of models, models use in industry and the negative side of the MDSE. We wonder to see such a mixture of the different discussions in one chapter! The next chapter on use cases is quite interesting. The next chapter provides a view on Model Driven Architecture which is the core of the scope of the book. The modelling levels and mappings are described with the help of architecture briefly in this unit.

The next unit presents the basic considerations on the adoption of MDSE and how it can be merged with the software development approaches of many kinds. The chapter six deals with the modelling languages which provides many diagrams and a good amount of discussions on UML. The next chapter illustrates clearly how a new model can be derived and what constituents form together the new models.

Models are merged, aligned, refactored, refined and translated to get implemented in the model transformation. [4] The chapter on Model-to-Model Transformations illustrated the transformation languages. The next chapter is the continuation of the previous one which deals with Model to text transformation. The chapter ten deals with the management aspects of the model-driven software architectures. The last chapter provides a very brief summary of the book.

This book is written in lucid style with many illustrations and diagrams which would enable the readers to gain good understanding. The discussions given in the text are brief and call for more descriptions in the future works.

References

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3. Marco Brambilla, Jordi Cabot, Manuel Wimmer (2012). Model-Driven Software Engineering in Practice. Morgan Claypool. ISBN: 9781608458820
4. S, Shandal, W Kozaczynski. Modle Transformation: The heart and soul of Model driven software development, *IEEE Software*, 20 (5) 42-45. 2003

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Book Review

Jan Rauch
Observational Calculi and Association Rules
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16 Chapters. 296 pages

Association Rules perhaps have significant impact in data mining than any other technique. In the last couple of years we have been encountering with many newer specific mining techniques and methods. Besides, we have mining of atomic level concepts to gain understanding of the data we have.

Jan Rauch took the mathematical formulation, the Observational Calculi which was formulated by *Petr Hajek* and *Tomas Havranek* to understand how the association rules can able to support the scientific hypotheses verification. He developed a theory based on the statement, "if we accept theoretical assumptions and verify a particular statement about the observed data, we accept a conclusion-a theoretical statement". Statistical techniques are warranted to make the theoretical assumptions to reality. Based on this concept, he produced the documentation on calculi association rules.

This book has four parts with 16 chapters which spread into a very large number of sub-sections. The Part I discusses the logical calculi behind the association rules. A basic chapter on the Data Matrices forms a component in this section. The core of the association rules is the Boolean attributes which are derived from an analysis of data matrix. The data matrices are explained using good examples where transactions are presented. The interpretations of Boolean attributes are given in the subsequent chapter. The 4ft quantifiers are described with properties and lemmas. The theorems, implications and possible extensions are outlined with good amount of descriptions in the next couple of chapters which leads the young researchers to gain understanding of the quantifiers.

There is an exclusive chapter on deduction rules in the calculi of association rules in this book that discuss the properties with adequate number of theorems. The GUHA methods were introduced with the intention of framing formulas for observational calculi. The GUHA methods are elaborately discussed with the SD4ft-Miner and Ac4ft miner for mine which enable to form strong measures for association rules in an exclusive chapter.

The book is supplemented with an extensive bibliography, references used and glossary. The author could have given possible applications for different domains which is required.

I found this book as the useful addition to the stock of knowledge on data mining. The author has made it clear that the present research community needs to look at not only journal literature but new books on specific themes for generating valuable research. This is a compendium to the data mining researchers on newer tasks.

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