

Call for Book Chapters

Book title: Feature Engineering for Machine Learning and Data Analytics

Publisher: The CRC Press, USA

The book will be in the *Chapman & Hall/CRC Data Mining and Knowledge Discovery Series*.

Editors:

Prof. Guozhu Dong, Wright State University, USA. Email: guozhu.dong@wright.edu.

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Important Dates:

Proposal Submission: January 31, 2017

Notification of Proposal Acceptance: February 15, 2017

Full Chapter Submission: July 15, 2017

Notification for Chapter Acceptance: August 15, 2017

Submission of the Camera-ready Chapters: October 15, 2017

Anticipated Book Publication: December 2017

Scope and Purpose:

This book aims to enunciate an important link underlying Machine Learning, Data Mining, Data Analytics, and Big Data. As these four areas advance with big data and novel data types, feature engineering becomes instrumental to effective machine learning and data analytics on evolving and ever growing data. The book will cover feature generation for diverse range of unstructured or semi-structured dataset types (e.g. image, text, sequence, time series, software, music, graph/networks, game-plays, speech), as well as feature construction, feature transformation, feature selection, feature analysis, and comparison of various types of features. We expect that a diverse coverage of topics will serve a unique platform for discussion of much needed feature engineering frameworks. We anticipate that the book will serve as a reference book for feature engineering in machine learning and data analytics.

Submissions are solicited on the following topics*, but not limited to:

- Feature Generation and Engineering for Image and Multimedia Data
- Feature Generation and Engineering for Time Series Data
- Feature Generation and Engineering for Music Data
- Feature Generation and Engineering for Speech and Audio Data
- Feature Generation and Engineering for Game Play Data
- Deep Learning based Feature Generation and Engineering
- Feature Generation and Engineering for Software and Malware Analysis
- Frequent Pattern based Feature Generation
- Feature Transformation and Feature Construction Methods
- Feature Engineering Frameworks

Chapters with highly novel data types and data analytic tasks are also welcome.

* It should be noted that the editors have invited several chapters from leading experts on the following topics and hence will not accept chapter proposals on these: feature selection and evaluation, feature generation and engineering for streaming data, feature generation and engineering for text data, feature generation and engineering for sequence data, and feature generation and analysis for social bot detection.

Proposal Submission: Prospective authors should submit a chapter proposal by January 31, 2017 including the following information:

- Title of the contribution/chapter
- Name of author, coauthors, institution, email address
- A summary of the contents of the proposed chapter (around 250 words)

Proposal Acceptance Notification: Authors will be notified by February 15, 2017 about the status of their proposals.

Full Chapter Submission: Chapters should be 20-25 pages length and will be reviewed by two/three expert reviewers to ensure the quality of the volume. All chapters must be original work, which have not been published elsewhere nor are currently under review for any other publication. The due date of full chapter submission is July 15, 2017. Style files in latex will be provided.

Inquiries and submissions can be forwarded to Prof. Guozhu Dong (guozhu.dong@wright.edu). Please use the subject "Feature Engineering Book".