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Tokuro Matsuo · Tsunenori Mine
Sachio Hirokawa
Editors

New Trends in E-service and Smart Computing
This book includes theory and practice on emerging technologies in e-service and artificial intelligence from an academic and professional viewpoint. In Chapter “Co-occurrence Relation” and “Ingredient Category” Recommend Alternative-Ingredients,” authors study on contents recommendation on cooking where several ingredients are used. When recipes are defined and some ingredients are not prepared, the system proposes alternative ingredients using data on co-occurrence relation and ingredients categories. The result of evaluation shows high effectiveness and tried to use the recommended ingredients in actual cooking workshop. Chapter “Design and Initial Evaluation of Bluetooth Low Energy Separate Channel Fingerprinting” presents a study on location information inference using data acquired by low-energy Bluetooth devices. The proposed algorithm employs channel-specific features in fingerprinting and is evaluated in the condition where sensor devices are positioned in a room. Chapter “Toward Sustainable Smart Mobility Information Infrastructure Platform: Project Overview” introduces the sustainable information infrastructure project for smart mobility systems. The project contains two features on applying lifecycle-oriented system development methods to real world and dealing with uncertainty in system design and development upper phase. Chapter “Model-Based Methodology Establishing Traceability Between Requirements, Design and Operation Information in Lifecycle-Oriented Architecture” presents a lifecycle-oriented development process which improves the requirement and design in terms of uncertainties for realizing sustainable information architecture for smart mobility. Authors show a case study using the proposed development process to a transfer guide app Patrash. Chapter “Sports Game Summarization Based on Sub-events and Game-Changing Phrases” introduces a summarization task of sports events on Twitter, focusing on an abstractive approach based on sub-events in the sports event. An experiment suing the proposed method shows the effectiveness of the sports game summarization method as compared with related work based on an extractive approach. Chapter “Headline Generation with Recurrent Neural Network” is aimed at generating a headline using a recurrent neural network which is based on a machine translation approach. Experiments show the effectiveness of the proposed method,
which can generate appropriate headlines but in some articles this method generate meaningless headlines. Chapter “Customer State Analysis with Enthusiasm Analysis” introduces a customer behavior analysis using enthusiasm analysis, which estimates customers’ activation levels. Author estimates enthusiasm levels, which denote customers’ activation, from observations and applies them to prediction of discovery of drop-off users. The result of evaluation confirms many drop-off users took lower enthusiasm levels in evaluation point and the enthusiasm level could be used to predict drop-off users.

Dr. Matsuo, Dr. Tsunenori Mine, and Dr. Sachio Hirokawa are grateful to the authors and reviewers for their contribution to this work. Editors also acknowledge with their gratitude the editorial team of Springer-Verlag for their support during the preparation of the manuscript.

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July 2017
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