Tuong Le

Sejong University
Digital Contents Research Institute
209, Neungdong-ro, Gwangjin-gu
Seoul, Republic of Korea

Phone: (+82) 010-2104-6385
(+84) 09-3818-6385
Email: tuonglecung@gmail.com
Homepage: https://sites.google.com/view/tuonglecung/

EDUCATION

Ph.D. Digital Contents, Sejong University, Republic of Korea (3/2017–2/2020)

M.S. Computer Science, University of Information Technology, Viet Nam National University Ho Chi Minh City, Vietnam (2011–2014)

B.S. Information Technology, University of Science, Viet Nam National University Ho Chi Minh City, Vietnam (2005–2009)

EMPLOYMENT

Research Assistant, Sejong University, Seoul, Korea (2017–now)

Researcher, Division of Data Science, Ton Duc Thang University, Vietnam (2014–2017)

Lecturer, Faculty of Information Technology, Ho Chi Minh City University of Food Industry, Vietnam (2010-2014)

Developer, Innotech Co., Ltd., Vietnam (2009–2010)

RESEARCH INTERESTS

Machine learning, Imbalanced learning

Data analysis, Data mining, Pattern mining

AWARDS AND SCHOLARSHIPS

PhD research fellow (3/2017–2/2020), by IMLab, Sejong University, South Korea

Student Travel Grant, IEEE SMC 2013, Manchester, UK by NAFOSTED, Vietnam

Toshiba scholarship 2012 by Toshiba Co., Ltd

Student Travel Grant, IBICA 2012, Kaohsiung, Taiwan by NAFOSTED, Vietnam

RESEARCH PROJECTS

1. Building improved classifier on imbalanced financial/business transaction data to predict company bankruptcy. Institute for Information & communications Technology Promotion (IITP) grant funded by the Korea government (MSIP), Project ID: 2017-0-00506 (Role: Researcher)
2. Mining patterns and its applications in text clustering and subspace clustering. NAFOSTED, Project ID: 102.05-2015.10, 2015–2017. (Role: Main researcher)
3. Developing algorithms for mining frequent sequence patterns and rules from sequence databases. NAFOSTED. Project ID: 102.05-2013.20 (2014–2016, Role: Technician)
4. Developing algorithms for mining frequent itemsets and top-k frequent itemsets based on Nodeset structure. FOSTECT, Project ID: FOSTECT.2014.BR.07, 2014–2015. (Role: Researcher)

PROFESSIONAL SERVICES

Invited reviewer for journals

1. IEEE Transactions on Cybernetics: 2018
2. Neural Computing and Applications: 2014, 2016, 2017, 2018 (6), **2019 (2)**
3. IEEE Access: 2016, 2017, 2018 (3), **2019 (3)**
4. Applied Soft Computing: 2018
5. Engineering Applications of Artificial Intelligence: 2018
6. International Journal of Machine Learning and Cybernetics: 2014, **2019**
7. Journal of Intelligent and Fuzzy Systems: 2018
8. Journal of Intelligent Information Systems: 2017
9. International Journal of Information Technology & Decision Making: 2015, 2016
10. Computational Intelligence: 2016
11. Intelligent Automation & Soft Computing: 2016
12. Progress in Artificial Intelligence (ESCI, Scopus): **2019**

Invited reviewer for conferences

IJCRS (2018), ACIIDS (2015, 2016), KSE (2014), ICCASA (2013)

Paper presentations

1. ICNGC 2018, Vung Tau, Vietnam
2. Next Generation Computing Conference 2017, Jeju, Korea
3. ACIIDS 2015, Bali, Indonesia
4. IEEE SMC 2013, Manchester, UK
5. ACIIDS 2013, Kuala Lumpur, Malaysia
6. IBICA 2012, Kaohsiung, Taiwan

PUBLICATIONS

SCI journals

1. **Tuong Le**, Sung Wook Baik. A robust framework for self-care problem identification for children with disability. Symmetry, 11(1), 89, 2019
2. **Tuong Le**, Bay Vo, Philippe Fournier-Viger, Mi Young Lee, Sung Wook Baik. SPPC: A New Tree Structure for Mining Erasable Patterns in Data Streams. Applied Intelligence, 49(2), 478–495, 2019
3. **Tuong Le**, Le Hoang Son, Minh Thanh Vo, Mi Young Lee, Sung Wook Baik. A Cluster-Based Boosting Algorithm for Bankruptcy Prediction in a Highly Imbalanced Dataset. Symmetry, 10(7), 250, 2018
4. **Tuong Le**, Mi Young Lee, Jun Ryeol Park, Sung Wook Baik. Oversampling techniques for bankruptcy prediction: Novel features from a transaction dataset. Symmetry, 10(4), 79, 2018
5. **Tuong Le**, Bay Vo, Sung Wook Baik. Efficient algorithms for mining top-rank-k erasable patterns using pruning strategies and the subsume concept. Engineering Applications of Artificial Intelligence, 68, 1–9, 2018
6. **Tuong Le**, Anh Nguyen, Bao Huynh, Bay Vo, Witold Pedrycz. Mining Constrained Inter-Sequence Patterns: A Novel Approach to Cope with Item Constraints. Applied Intelligence, 48(5), 1327–1343, 2018
7. Bay Vo, **Tuong Le***, Witold Pedrycz, Giang Nguyen, Sung Wook Baik. Mining erasable itemsets with subset and superset itemset constraints. Expert Systems with Applications, 69, 50–61, 2017
8. Tung Kieu, Bay Vo, **Tuong Le***, Zhi-Hong Deng, Bac Le. Mining top-k co-occurrence items with sequential pattern. Expert Systems with Applications, 85, 123–133, 2017
9. Bay Vo, **Tuong Le***, Giang Nguyen, Tzung-Pei Hong. Efficient algorithms for mining erasable closed patterns from product datasets. IEEE Access, 5(1), 3111–3120, 2017
10. Bay Vo, Sang Pham, **Tuong Le***, Zhi-Hong Deng. A novel approach for mining maximal frequent patterns. Expert Systems with Applications, 73, 178–186, 2017
11. **Tuong Le**, Bay Vo. The lattice-based approaches for mining association rules: a review. WIREs Data Mining and Knowledge Discovery, 6(2), 140–151, 2016
12. Bay Vo, **Tuong Le***, Frans Coenen, Tzung-Pei Hong. Mining frequent itemsets using the N-list and subsume concepts. International Journal of Machine Learning and Cybernetics, 7(2), 253–265, 2016
13. **Tuong Le**, Bay Vo. An N-list-based algorithm for mining frequent closed patterns. Expert Systems with Applications, 42(19), 6648–6657, 2015
14. Giang Nguyen, **Tuong Le***, Bay Vo, Bac Le. EIFDD: An efficient approach for erasable itemset mining of very dense datasets. Applied Intelligence, 43(1), 85–94, 2015
15. Bay Vo, **Tuong Le***, Tzung-Pei Hong, Bac Le. Fast updated frequent-itemset lattice for transaction deletion. Data and Knowledge Engineering, 96âĂŞ97, 78–89, 2015
16. Quyen Huynh, **Tuong Le**, Bay Vo, Bac Le. An efficient and effective algorithm for mining top-rank-k frequent patterns. Expert Systems with Applications, 42(1), 156–164, 2015
17. **Tuong Le**, Bay Vo, Giang Nguyen. A survey of erasable itemset mining algorithms. WIREs Data Mining and Knowledge Discovery, 4(5), 356–379, 2014

18. Bay Vo, **Tuong Le**, Tzung-Pei Hong, Bac Le. An effective approach for maintenance of pre-large-based frequent-itemset lattice in incremental mining. Applied Intelligence, 41(3), 759–775, 2014
19. **Tuong Le**, Bay Vo. MEI: An efficient algorithm for mining erasable itemsets. Engineering Applications of Artificial Intelligence, 27, 155–166, 2014

Peer-reviewed conferences

1. Giang Nguyen, **Tuong Le**, Bay Vo, Bac Le: Discovering Erasable Closed Patterns. ACIIDS 2015, Bali, Indonesia, 368–376
2. Giang Nguyen, **Tuong Le**, Bay Vo, Bac Le: A New Approach for Mining Top-Rank-k Erasable Itemsets. ACIIDS 2014, Bangkok, Thailand, 73–82
3. Giang Nguyen, **Tuong Le**, Bay Vo, Bac Le, Phi-Cuong Trinh. Subsume concept in erasable itemset mining. ICCCI 2014, Seoul, Korea, 515–523
4. Bac Le, Bay Vo, Quyen Huynh, **Tuong Le**. Enhancing the mining top-rank-k frequent patterns. IEEE SMC 2014, San Diego, CA, USA, 2008–2012
5. **Tuong Le**, Trong Hai Duong, Bay Vo, Sanggil Kang: Consensus for Collaborative Ontology-Based Vietnamese WordNet Building. ACIIDS 2013, Kuala Lumpur, Malaysia, 499–508
6. Bay Vo, **Tuong Le**, Tzung-Pei Hong, Bac Le: Maintenance of a Frequent-Itemset Lattice Based on Pre-large Concept. KSE 2013, Hanoi, Vietnam, 295–305
7. Bay Vo, **Tuong Le**, Frans Coenen, Tzung-Pei Hong. A hybrid approach for mining frequent itemsets. IEEE SMC 2013, Manchester, UK, 4647–4651
8. **Tuong Le**, Bay Vo, Frans Coenen. An efficient algorithm for mining erasable itemsets using the difference of NC-Sets. IEEE SMC 2013, Manchester, UK, 2270–2274
9. **Tuong Le**, Bay Vo, Trong Hai Duong: Personalized Facets for Semantic Search Using Linked Open Data with Social Networks. IBICA 2012, Kaohsiung, Taiwan, 312–317

*: Corresponding author

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