Curriculum Vitæ of Emre Yalcin

Department of Computer Engineering, Sivas Cumhuriyet University

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Academic Page - Publons Profile - Scopus Profile - Google Scholar Page

Research Interest	I work in the fields of recommender systems, information filtering, and machine learning. My current research mainly focuses on revealing and alleviating challenges of popularity bias and other potential bias issues in recommender systems.

Education

PhD in Computer Engineering — Eskisehir Technical University, Turkey
Advisor: Assoc. Prof. Dr. Alper Bilge — 11/2020
Dissertation: Novel automatic group identification and preference aggregation methods for group recommender systems
Cumulative GPA: 3.78 / 4

MSc in Computer Engineering — Anadolu University, Turkey
Advisor: Assoc. Prof. Dr. Alper Bilge — 07/2016
Thesis: Binary-data multi-criteria recommender systems based on naïve Bayes classifier
Cumulative GPA: 3.63 / 4

BSc in Computer Engineering — Istanbul University, Turkey
Cumulative GPA: 2.83 / 4 — 06/2012

Experience

Assistant Professor Dr. — Sivas Cumhuriyet University
Department of Computer Engineering — 11/2021-current

Research Assistant — Sivas Cumhuriyet University
Department of Computer Engineering — 02/2018-11/2021

Research Assistant — Anadolu University
Department of Computer Engineering — 02/2014-02/2018

Research Assistant — Yozgat Bozok University
Department of Computer Engineering — 09/2012-01/2014

Teaching & Supervision

Lecturer
1. Introduction to Databases (undergrad)
2. Algorithms and Programming (undergrad)
3. Database Design and Application (undergrad)
4. Fundamentals of Algorithm and Programming (undergrad)
5. Parallel Programming (undergrad)
6. Introduction to Recommender Systems (grad)

Research Visits

Visiting Researcher (Erasmus Programme) — Yarmouk, Jordan
Yarmouk University — 03/2019

Visiting Researcher (Erasmus Programme) — Prizren, Kosovo
University of Prizren Ukshin Hoti — 03/2022

Skills	**Language**
	Yökdil (English) by OSYM September, 09, 2021
	Score = 90.00
	Programming
	Python, Java, C/C++, Matlab, C#, SQL, Asp.Net

Projects **Manager**

1. Investigating potential biases towards blockbuster items in ranking-based recommendations and developing a novel method to mitigate its adverse effects
Sivas Cumhuriyet University, Grant No. M-2021-811   05/2021-current.

2. Developing novel methods to mitigate the adverse effects of the popularity bias problem in recommender systems
TUBITAK, Grant No. 122E040   06/2022-current.

Researcher

1. Binary-Data Multi-Criteria Recommender Systems Based On Naïve Bayes Classifier
Anadolu University, Grant No. 1508F588   12/2015-08/2016.

2. Developing Novel Grouping and Aggregation Techniques for Group Recommender Sytems
Sivas Cumhuriyet University, Grant No. M-759   03/2019-03/2020.

Publications **SCI & SCI-E indexed Journals**

1. Yalcin, E. and Bilge, A., **Popularity bias in personality perspective: An analysis of how personality traits expose individuals to the unfair recommendation**, *Concurrency and Computation: Practice and Experience*, Accepted for publication.
Journal quartile (WoS): Q3

2. Fakhar M.Z., Yalcin E., and Bilge, A. **A survey of smart home energy conservation techniques**, *Expert Systems with Applications*, 213, 118974, 2023.
Journal quartile (WoS): Q1

3. Yalcin, E. and Bilge, A., **Evaluating unfairness of popularity bias in recommender systems: A comprehensive user-centric analysis**, *Information Processing & Management*, 59 (6), 103100, 2022.
Journal quartile (WoS): Q1

4. Yalcin E., **Exploring potential biases towards blockbuster items in ranking-based recommendations**, *Data Mining and Knowledge Discovery*, 36, 2033–2073, 2022.
Journal quartile (WoS): Q1

5. Yalcin, E. and Bilge, A., **Treating adverse effects of blockbuster bias on beyond-accuracy quality of personalized recommendations**, *Engineering Science and Technology, an International Journal*, 33, 101083, 2022.
Journal quartile (WoS): Q1

6. Fakhar M.Z., Yalcin E., and Bilge, A. **IESR: Instant Energy Scheduling Recommendations for Cost Saving in Smart Homes**, *IEEE Access*, 10, 52178–52195, 2022.
Journal quartile (WoS): Q2

7. Yalcin, E. and Bilge, A., **Investigating and counteracting popularity bias in group recommendations**, *Information Processing & Management*, 58 (5), 102608, 2021.
Journal quartile (WoS): Q1

8. Yalcin, E. and Bilge, A., **Novel automatic group identification approaches for group recommendation**, *Expert Systems with Applications*, 174, 114709, 2021.
Journal quartile (WoS): Q1

9. Yalcin, E., Ismailoglu F., and Bilge, A., **An entropy empowered hybridized aggregation technique for group recommender systems**, *Expert Systems with Applications*, 166, 114111, 2021.
Journal quartile (WoS): Q1

10. Yalcin, E. and Bilge, A., **Binary multicriteria collaborative filtering**, *Turkish Journal of Electrical Engineering & Computer Sciences*, 28 (6), 3419–3437, 2020.
    Journal quartile (WoS): Q4

Other Journals

1. Yalcin E., **Effects of neighborhood-based collaborative filtering parameters on their blockbuster bias performances**, *Sakarya University Journal of Computer and Information Sciences,* 5 (2) , 157–368, 2022.

2. Yalcin E., **Collaborative filtering algorithms' bias towards highly-liked items**, *BSEU Journal of Science,* 8 (1) , 279–291, 2021.

3. Yalcin, E. and Bilge, A., **A personality-based aggregation technique for group recommendation**, *Eskişehir Technical University Journal of Science and Technology A-Applied Sciences and Engineering*, 21 (4), 486–498, 2020.

International Conferences

1. Yalcin E., **An empirical analysis of how users with different genders are not equally affected by the recommendations**, *6th International Conference on Engineering Technologies*, 17–19 November 2022, Konya, Turkey.

2. Tacli Y., Yalcin E., and Bilge A., **Novel approaches to measuring the popularity inclination of users for the popularity bias problem**, *6th International Symposium on Multidisciplinary Studies and Innovative Technologies*, 20–22 October 2022, Ankara, Turkey.

3. Yalcin E., ***PopHybrid*: A Novel Item Popularity-aware Hybrid Approach For Long-tail Recommendation**, *4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications*, 9–11 June 2022, Ankara, Turkey.

4. Yalcin E., **The unfairness of collaborative filtering algorithms' bias towards blockbuster items**, *3rd International Conference on Artificial Intelligence and Applied Mathematics in Engineering*, 1–3 October 2021, Antalya, Turkey.

5. Yalcin E., **Blockbuster: A new perspective on popularity-bias in recommender systems**, *6th International Conference on Computer Science and Engineering*, 15 - 17 September 2021, Ankara, Turkey.

6. Yalcin, E., Yuksek A.G., and Bilge, A., **An empirical evaluation of aggregation techniques used in group recommender systems**, *8th International Conference on Advanced Technologies*, Sarajevo, Bosnia and Herzegovina, 2019.

7. Yalcin, E., **A new neighborhood selection method for collaborative filtering recommender systems**, *International Conference on Research in Education & Science*, Mugla, Turkey, 2016.

Articles under review

1. Gulsoy M., Yalcin, E., and Bilge, A., **Robustness of privacy-preserving collaborative recommenders against popularity bias problem**, submitted to *PeerJ Computer Science*.
   Journal quartile (WoS): Q2

2. Kaya, T., Yalcin, E., and Kaleli, C., **A novel classification-based shilling attack detection approach for multi-criteria recommender systems**, submitted to *Computational Intelligence*.
   Journal quartile (WoS): Q3

3. Tacli, Y., Yalcin, E., and Bilge, A., ***Duor: Dynamic user-oriented re-ranking* treatment method for the popularity bias issue of the recommendation algorithms**, submitted to *Computer Standards & Interfaces*.
   Journal quartile (WoS): Q1

Academic Services

Reviewer for SCI & SCI-E indexed Journals

- Expert Systems with Applications (20)

- Knowledge and Information Systems (2)

- Pamukkale University Journal of Engineering Sciences (2)

- Computer Communications (1)

- Information Processing & Management (1)

- User Modeling and User-adapted Interaction (1)

- IEEE Access (1)

- Turkish Journal of Electrical Engineering & Computer Sciences (1)