

# Makbule Gulcin Ozsoy

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## CONTACT INFORMATION

University College Dublin  
Insight Centre for Data Analytics  
Dublin, IRELAND

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<https://mgulcin.github.io/>

## RESEARCH INTERESTS

Recommender systems, Machine learning, Information retrieval

## EDUCATION

**Middle East Technical University (METU), Ankara, TURKEY**

- PhD, Computer Engineering, June 2016, GPA: 4.00/4.00
  - Dissertation Title: A Multi-Objective Recommendation System
- Visiting Student, Computer Science, October 2014 - September 2015
  - University of Calgary, Calgary-Alberta, CANADA

**Middle East Technical University (METU), Ankara, TURKEY**

- MSc, Computer Engineering, February 2011, GPA:3.50/4.00
  - Dissertation Title: Text Summarization Using Latent Semantic Analysis

**Middle East Technical University (METU), Ankara, TURKEY**

- BSc, Computer Engineering, June 2008, GPA: 3.00/4.00
  - Senior Year Project: RadioRead - Text mining on Turkish medical radiology reports

## WORK EXPERIENCE

**Insight Centre for Data Analytics, University College Dublin (UCD), Dublin, IRELAND**

- Postdoctoral Researcher **February 2019 - present**
  - Recommender Systems (Python): Developing methods for making explainable recommendations in heterogeneous information networks, Designing and developing methods for reinforcement learning-based recommender systems

**Unscrambl LLC, Ankara, TURKEY**

- Data Scientist **October 2016 - February 2019**
  - Natural Language Processing (Python): Developed modules for Named Entity Recognition and intent classification for Turkish and English texts
  - Machine Learning (Python): Designed and developed data pre-processing, data analysis, model training and evaluation modules, Performed analysis on batch data to extract insights and to solve variety of business problems

**T2 Yazilim, Ankara, TURKEY**

- Software Engineer **June 2012 - October 2016**
  - GUI Development (Java): GUI development for a desktop application using Java Swing
  - Natural Language Processing (Java): Sentiment analysis on short unstructured documents, Designed and developed natural language processing modules of the project, Applied several different machine learning techniques
  - Computer Networks (C++): Inter-domain routing algorithms on MANETs (Mobile Ad-Hoc Networks), Performance-enhancing proxy for IP optimization on radio and satellite links

**TUBITAK (Scientific and Technological Research Council of Turkey), Ankara, TURKEY**

- Researcher **September 2009 - June 2012**
  - Computer Networks (C++): High Frequency radio communications, Designed and developed layered network protocol and clients for Stanag 5066 protocol, Routing algorithms in ad-hoc networks

**HAVELSAN, Ankara, TURKEY**

- Software Engineer **June 2008 - September 2009**
  - Image processing (C++): Moving object tracker and object classification of real-time images, Remote sensing and satellite image processing

NON-REFEREED  
PUBLICATIONS

- Bichen Shi, Elias Z Tragos, Makbule Gulcin Ozsoy, Ruihai Dong, Barry Smyth, Neil Hurley, Aonghus Lawlor. A Distributed Asynchronous Deep Reinforcement Learning Framework for Recommender Systems. REVEAL workshop, RecSys 2020. (2020)
- Makbule Gulcin Ozsoy. Beyond Next Item Recommendation: Recommending and Evaluating List of Sequences. arXiv preprint arXiv:2008.13281 (2020)
- Makbule Gulcin Ozsoy. Utilizing FastText for Venue Recommendation. arXiv preprint arXiv:2005.12982 (2020)
- Makbule Gulcin Ozsoy. From Word Embeddings to Item Recommendation. arXiv preprint arXiv:1601.01356 (2016)

REFEREED  
PUBLICATIONS

- Makbule Gulcin Ozsoy, Diarmuid O'Reilly Morgan, Panagiotis Symeonidis, Elias Z Tragos, Neil Hurley, Barry Smyth, Aonghus Lawlor. MP4Rec: Explainable And Accurate Top-N Recommendations In Heterogeneous Information Networks. Accepted. IEEE Access (2020)
- Makbule Gulcin Ozsoy, Neil Hurley, Barry Smyth, Elias Z Tragos, James Geraci, Aonghus Lawlor. A Survey On Deep Reinforcement Learning-based Recommender Systems. Submitted (2020)
- Bichen Shi, Makbule Gulcin Ozsoy, Neil Hurley, Barry Smyth, Elias Z. Tragos, James Geraci, Aonghus Lawlor. PyRecGym: A Reinforcement Learning Gym for Recommender Systems. RecSys 2019: 491–495 (2019)
- Makbule Gulcin Ozsoy, Faruk Polat, Reda Alhajj. Effective Induction of Gene Regulatory Networks Using a Novel Recommendation Method. International Journal of Data Mining and Bioinformatics 22(2): 91-112 (2019)
- Makbule Gulcin Ozsoy, Tansel Ozyer, Faruk Polat, Reda Alhajj. Realizing Drug Repositioning by Adapting a Recommendation System to Handle the Process. BMC Bioinformatics 19(1): 136 (2018)
- Makbule Gulcin Ozsoy, Faruk Polat, Reda Alhajj. Time Preference-aware Dynamic Recommendation Enhanced with Location, Social Network and Temporal Information. ASONAM 2016: 909-916 (2016)
- Makbule Gulcin Ozsoy, Faruk Polat, Reda Alhajj. Making Recommendations by Integrating Information from Multiple Social Networks. Applied Intelligence 45(4): 1047-1065 (2016)
- Makbule Gulcin Ozsoy, Faruk Polat, Reda Alhajj. Modeling Individuals and Making Recommendations Using Multiple Social Networks. ASONAM 2015: 1184-1191 (2015)
- Makbule Gulcin Ozsoy, Faruk Polat, Reda Alhajj. Inference of Gene Regulatory Networks via Multiple Data Sources and A Recommendation Method. BIBM 2015: 661-664 (2015)
- Makbule Gulcin Ozsoy, Kezban Dilek Onal, Ismail Sengor Altinogvde. Result Diversification for Tweet Search. WISE 2014: 78-89 (2014)
- Makbule Gulcin Ozsoy, Faruk Polat, Reda Alhajj. Multi-Objective Optimization Based Location and Social Network Aware Recommendation. COLLABORATECOM 2014: 233-242 (2014)
- Makbule Gulcin Ozsoy, Ruket Cakici. Contrastive Max-Sum Opinion Summarization. AIRS 2014: 256-267 (2014)
- Makbule Gulcin Ozsoy, Faruk Polat. Trust Based Recommendation Systems. MASSN 2013, Held in conjunction with ASONAM 2013: 1267-1274 (2013)
- Makbule Gulcin Ozsoy, Ferda Nur Alpaslan, Ilyas Cicekli. Text Summarization using Latent Semantic Analysis. Journal of Information Science 37(4): 405-417 (2011)
- Makbule Gulcin Ozsoy, Ilyas Cicekli, Ferda Nur Alpaslan. Text Summarization of Turkish Texts using Latent Semantic Analysis. COLING 2010: 869-876. (2010)

## HONORS AND AWARDS

2014 - 2015 Recipient of the TUBITAK - International Doctoral Research Fellowship Program  
2013 Won the TUBITAK - BIDEB 2224 - August grant to attend ASONAM'2013  
2012 Finalist in Google Anita Borg Scholarship (EMEA)  
2010 Won the AFNLP-CIPS Scholarship grant to attend COLING'2010  
2010 Won the TUBITAK - BIDEB 2224 - July grant to attend COLING'2010  
2008 Graduated in Deans Honor List from the Middle East Technical University  
2003 Ranked in the first 0.05% among 1.5 million students in University Entrance Exam (OSS)

## SKILLS

Programming Languages: Python, Java, C++, C, SQL  
Data Analysis and Machine Learning Tools: Pandas, Numpy, Scikit-learn, Jupyter Notebook, gensim, ChainerRL, Tensorflow, Wandb, spaCy, Rasa NLU, R, Apache Lucene, Weka, Mallet, LingPipe  
Other Scientific Tools: OMNET++, Matlab, Apache Spark, OSGI  
Software Engineering Tools: IntelliJ IDEA, Eclipse, Git, SVN, Atlassian Platforms, IBM Rational Platforms  
Operating Systems: Unix/Linux, Windows

## LANGUAGES

Turkish: Native  
English: Fluent