

Makbule Gulcin Ozsoy

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

SKILLS

- **Programming Languages:** Python, Java, C++, C, SQL
 - For development, I primarily use Python since 2016. Depending on the project, I have used Java and C++. In general, I try to pick the most suitable language for the task.
- **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
 - I frequently use Pandas, Numpy, Scikit-learn and Jupyter Notebook. Recently, I started to use ChainerRL, Tensorflow and Wandb. Depending on the project, I use tools designed for that domain, e.g., Rasa NLU for named entity recognition and intent classification.
- **Other Scientific Tools:** OMNET++, Matlab, Apache Spark, OSGI
- **Software Engineering Tools:** IntelliJ IDEA, Eclipse, Git, SVN, Atlassian Platforms (JIRA, Confluence), IBM Rational Platforms (ClearCase, ClearQuest, RequisitePro, Rational Software Architect)
- **Operating Systems:** Unix/Linux, Windows

SELECTED PUBLICATIONS

See <https://mgulcin.github.io/research/> or https://scholar.google.com/citations?user=Cmbcf_UAAAAJ for the full list.

- 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)
- 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, Tansel Ozyer, Faruk Polat, Reda Alhaj. Realizing Drug Repositioning by Adapting a Recommendation System to Handle the Process. BMC Bioinformatics 19(1): 136 (2018)
- Makbule Gulcin Ozsoy. From Word Embeddings to Item Recommendation. arXiv preprint arXiv: 1601.01356 (2016)
- 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, Kezban Dilek Onal, Ismail Sengor Altingovde. Result Diversification for Tweet Search. WISE 2014: 78-89 (2014)
- Makbule Gulcin Ozsoy, Ferda Nur Alpaslan, Ilyas Cicekli. Text Summarization using Latent Semantic Analysis. Journal of Information Science 37(4): 405-417 (2011)

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)

LANGUAGES

Turkish: Native
English: Fluent