Muhammed Yavuz Nuzumlalı

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SUMMARY

I am a Ph.D. student focused on machine learning (ML) and natural language processing (NLP) domains as well as being a machine learning engineer, an iOS technical leader, and an open-source software contributor.

EDUCATION

Bogazici University,   **Istanbul, Turkey**

- *Ph.D. in Computer Engineering,*   January 2016 - Present
  - Advisor : Taylan Cemgil
- *M.S. in Computer Engineering,*   September 2011 - January 2015
  - Thesis : Analyzing Stemming And Sentence Simplification Methodologies For Turkish Multi-Document Text Summarization
  - Advisor : Arzucan Özgür
- *B.S. in Computer Engineering,*   September 2006 - June 2011

PUBLICATIONS

Nuzumlalı, M. Y., & Özgür, A. (2014). Analyzing Stemming Approaches for Turkish Multi-Document Summarization. *In Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP)* (pp. 702-706)

TECHNOLOGY SKILLS

Proficient : Objective-C
Competent : Python, Ruby, Java
Familiar : C++, C, Swift, Perl, MATLAB, Octave, Cassandra, Spark, Spark MLLib

RESEARCH EXPERIENCE

***Ph.D. Student* at Bogazici University**   **January 2016 - Present**

- Performing research on online matrix factorization techniques and their usage on the analysis of time series data.
- Working on a research project on developing efficient Monte Carlo methods for large scale matrix and tensor factorization problems. This study is supported by a scholarship from Scientific and Technological Research Council of Turkey (TÜBİTAK).

***M.S. Student* at Bogazici University**   **September 2011 - January 2015**

- Developed the first Multi-Document Summarization (MDS) system for Turkish.
  - Created the first public multi-document summarization dataset for Turkish.
  - Analyzed in-detail the effects of using different stemming policies on summary quality. This study is accepted to EMNLP 2014 conference.
- Developed the first sentence simplification system for Turkish.

- Applied simplification as a preprocessing step in MDS problem, analyzed the effects on summary quality.
- Working on applying simplification to Machine Translation (MT) problem.

Member of AILab at **Bogazici University** **June 2010 - June 2011**

- Attended to RoboCup Rescue Simulation League with RoboAKUT team. We became the 5th best team in the competition.
- Proposed and implemented a bidirectional A* search algorithm for searching of humans by agents in the competition. The new algorithm improved the average search time complexity by approximately 50%.

PROFESSIONAL EXPERIENCE

Senior Software Engineer at **Inomera Research** **January 2013 - Present**

- *Lead Machine Learning Engineer at Netmera*
  - Led the research project, which aims to automatically analyze huge amount of user behavior data collected from mobile applications, and make inferences and recommendations with the help of ML and NLP techniques.
    * Developed a user clustering system having a high dimensional space with $1M+$ users and $2000+$ features per application.
    * System clusters users in an online fashion via running streaming k-means algorithm in reduced input space. Non-negative matrix factorization (NMF) is used for dimensionality reduction.
    * Working on the development of the recommendation system using matrix and tensor factorization techniques.
- *Tech Lead of the iOS team*
  - Developed Netmera iOS SDK from scratch. It has great test coverage, and all testing and deployment process is automated via continuous integration.
  - Responsible for mentoring engineers, reviewing codes, deciding code standards, assuring best practices are followed.
  - Under my lead, our team have completed several very successful projects to our clients, some of which are the most important mobile carrier, commerce, and shopping clients in Turkey.
- Led the company during the adoption of software development standards like code reviewing, testing, maintaining coverage, continuous integration, continuous delivery, and automatic code analysis.
- Pioneered the migration from central version control systems like *CVS* and *Subversion* to *git* in the whole company.

iOS Developer at **Arneca Technology** **July 2011 - January 2013**

- Developed a few interactive magazine applications, an EPUB reader application, and a template application used to robustly publish 30+ applications for different events organized around the world.

OPEN SOURCE EXPERIENCE

Core Team Member at **CocoaPods** **October 2015 - Present**

- Reduced "pod search" command's response time for full text search by 90% by implementing an inverted document index for search.

- Actively contributing to the project by adding new features and fixing issues reported by users.

CERTIFICATES   *Coursera*
- Machine Learning (Stanford University)   April 2015
- Mining Massive Datasets (Stanford University)   March 2015

AWARDS
- M.S. Scholarship from TÜBİTAK   September 2011 - September 2013
    - A very competitive scholarship, which is given only to a limited number of students with exceptional GPA scores and Academic Personnel and Graduate Education Exam (ALES) scores.
- EMNLP 2014 Full Student Scholarship   October 2014

OTHER SKILLS   *Spoken Languages*

- Turkish (Native)
- English (Proficient)

REFERENCES   ***Arzucan Özgür, Assistant Professor***
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