

BURAK KERİM AKKUŞ

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EDUCATION

- 2014– **Ph.D. in Computer Engineering, Middle East Technical University**
Natural Language Processing, Question Answering, Deep Learning
My research centres on using Deep Neural Networks for building Question Answering Systems with Natural Languages. So far, I finished taking courses and passed the qualifying exam for my Ph.D. studies with a review on neural models for question answering systems. I plan to develop Recurrent Neural Network models with Attention Mechanisms to find relevant information in given texts and extract passages using Pointer Networks or generate answers using RNN based language models. I also plan to integrate a parsing model -dependency or shallow semantics- in a Multi-task environment to improve question answering systems.
- Courses Deep Learning, Machine Learning, Artificial Intelligence, Knowledge Engineering, Computational Linguistics
- 2011–2014 **M.S. in Computer Engineering, Middle East Technical University**
Natural Language Processing, Machine Learning
Thesis: Supertagging with Combinatory Categorical Grammar for Dependency Parsing
In this thesis, I studied Combinatory Categorical Grammar formalism and built a Logistic Regression model for supertagging Turkish texts for Dependency Parsing.
- Courses Statistical Methods in Natural Language Processing, Information Retrieval, Web Search Engine Design
- 2006–2011 **B.S. in Computer Engineering, Middle East Technical University**
Senior Design Project: Created a user friendly interface for mobile devices based on context awareness and adaptation using accelerometer data and ambient light sensor

COMPUTER SKILLS

- Working Python, C, C++, Java
- Basic Unix Shell, JavaScript, CSS, HTML, PHP, SQL, MATLAB

EXPERIENCE

- Present **Research Assistant, Middle East Technical University, Ankara, Turkey**
- June 2012 **Research**
Worked on Morphology, Sequence Labelling, Parsing, Text Categorization, Language Models, Sentence Generation, Question Answering
- Teaching**
- Natural Language Processing (with *Python*)
 - C Programming, Data Structures (with *C++*), Algorithms (with *C++*)
 - Software Development with Scripting Languages (with *Python* and basic *Django, HTML, CSS, JavaScript*)
 - Computer Engineering Design I-II: Supervising graduation projects of senior students

- October 2016 **Funded Student**, *Hacettepe University & METU, Ankara, Turkey*
- October 2013 Understanding Images And Visualizing Text: Semantic Inference And Retrieval By Integrating Computer Vision And Natural Language Processing (vision.cs.hacettepe.edu.tr/research.php)
- Worked on a project for transcribing the visual contents of images with descriptions
 - Constructed template based sentence generation models
 - Constructed word and phrase based language models for sentence generation using chunking
- Sponsors: The Scientific and Technological Research Council of Turkey (TUBİTAK) and European Union under European Cooperation in Science and Technology (COST) Programme
- June 2012 **Software Engineer**, *VLMedia-Rotasoft, Ankara, Turkey*
- October 2011 Web development and mobile application development for the social network, Waplog.
- Added social games to the website to increase interactivity between users (**Kohana** framework with **PHP**).
 - Built modules for data logging and statistics using **Redis** and **JavaScript**
 - Created the first version of the **Android** application for the website (**Java**).
- August 2010 **Intern**, *HAVELSAN, Ankara, Turkey*
- July 2010 Built a test automation software for **Java** based programs using Framework for Integrated Testing (FIT) in an R&D project.
- August 2009 **Intern**, *Optimal Software Electronics and Engineering Company, Ankara, Turkey*
- July 2009
- Developed a mobile application based on **Java Micro Edition** including a file manager, media recorder and player, location based services, messaging and phone applications
 - Designed and implemented the user interface of same project
 - Managed the configuration and integration of the same project

PUBLICATIONS

- 2017 **Initial Explorations of CCG Supertagging for Universal Dependency Parsing**
Burak Kerim Akkuş, H. Azizoğlu, and R. Çakıcı
 CoNLL 2017 Shared Task: Multilingual Parsing from Raw Text to Universal Dependencies
- 2017 **Data-driven Image Captioning via Salient Region Discovery**
M. Kilickaya, Burak Kerim Akkuş, R. Çakıcı, A. Erdem, E. Erdem, and N. İkizler-Cinbiş
 IET Computer Vision
- 2013 **Categorization of Turkish News Documents with Morphological Analysis**
Burak Kerim Akkuş and R. Çakıcı
 Association for Computational Linguistics, Student Research Workshop

AWARDS AND SCHOLARSHIPS

- 2006 University Entrance Exam, 20th place in 1.5m examinees
 Student Selection and Placement Center (ÖSYM)
- 2005 13th National Physics Olympics, 3rd place in Mediterranean region
 Scientific and Technological Research Council of Turkey (TUBİTAK)
- 2002 7th National Elementary Mathematics Olympics, Bronze Medal
 Scientific and Technological Research Council of Turkey (TUBİTAK)
- 2008 Turkish Education Foundation (TEV) Outstanding Success Scholarship
- 2006 Middle East Technical University (METU) Outstanding Success Scholarship
- 2006 KYK Outstanding Success Scholarship

INTERESTS

Sailing, Photography, Astronomy, Calligraphy, Drawing