ZEYNEP AKKALYONCU YILMAZ

Master's student working on deep learning for natural language processing at the University of Waterloo

EDUCATION

present | 2018

MMath in Computer Science
University of Waterloo — Waterloo, ON, Canada

GPA: 91.00 / 100.00
Courses: Theory of Deep Learning, Data-Intensive Distributed Computing, Data Infrastructure

2017 | 2013

BS in Computer Engineering
Middle East Technical University — Ankara, Turkey

GPA: 3.37 / 4.00 - Ranked in the top 10% of the graduating class
Courses: Natural Language Processing, Machine Learning, Statistics, Linear Algebra, Differential Equations, Data Management and File Systems

WORK EXPERIENCE

present | 2018

Graduate Research Assistant
University of Waterloo — Waterloo, ON, Canada

• Working on neural text generation models with Prof. Jimmy Lin at the Data Systems Group
• Currently focusing on improving the quality of answer generation from knowledge graphs

2017 | 2016

Undergraduate Research Intern
KOVAN Research Lab — Ankara, Turkey

• Built a deep reinforcement learning agent that manipulates stacked objects using TensorFlow
• Wrote Python scripts to generate random scenes in Blender to train and test models
• Conducted literature review regarding motion planning based on natural language commands

2015

Software Engineering Intern
ASELSAN Inc. — Ankara, Turkey

• Developed a software prototype to track and plot the movement of a mobile device in real time
• Implemented a C++ library that extracts and displays motion information from built-in sensors
• Benchmarked different signal processing techniques in terms of speed and robustness

TEACHING ASSISTANTSHIPS

present | 2018

Graduate Teaching Assistant
University of Waterloo — Waterloo, ON, Canada

• Evaluated the assignments of the course Principles of Data Management and Use
• Managed the discussion forums and course content over the university's online learning platform

2017 | 2015

Undergraduate Teaching Assistant
Middle East Technical University — Ankara, Turkey

• Collaborated with the instructor in lab preparation and execution for the course Data Structures
• Assisted 100+ students in their programming labs of the course Introduction to C Programming

SELECTED PROJECTS

2018

Study of Solr on Large-Scale Document Collections
https://github.com/ljj7975/solr-evaluation

• Evaluation of the effectiveness of Solr as a search tool for terms with different selectivity
• Implemented multi-threaded and distributed variations of a sample data analytic workload in Scala
• Demonstrated more than 10% decrease in execution time with filtering over documents in HDFS using Spark compared to querying with Solr in a Kubernetes cluster for high frequency terms

2018

Tardis NMT
https://github.com/achyudhk/Tardis

• Distributed ensemble of seq2seq models with different hyperparameters and data splits
• Developed a deep seq2seq model in Keras and compressed ensemble with PySpark using Elephas
• Achieved a 1.5 increase in the BLEU score for neural machine translation on the WMT'14 English-Viatnamese dataset with the ensemble

2017

Smart Shopping List
http://senior.ceng.metu.edu.tr/2017/thechaincoders

• Cross-platform mobile Xamarin shopping list application written in C#
• Created a hybrid recommendation system in Python to make tailored product suggestions
• Implemented a virtual shopping assistant using NLTK featuring speech detection and generation

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CONTACT INFO

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SKILLS

Python	SQL
C++	Spark
C	Hadoop
Scala	Kubernetes
Java	Docker
PyTorch	Git
TensorFlow	Unix
Keras	Bash
NumPy	
Matplotlib	
NLTK	
MATLAB	
pandas	

LANGUAGES

English   Turkish
French   Russian

ACTIVITIES

Technovation Mentor
Turkish National Chess Team Player
TED Symphony Orchestra Violinist

REFERENCES

Available upon request