Ege Ersü

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Education

The University of Edinburgh *67.7* 2020- September 2021 *Edinburgh, UK*
Master of Science in Informatics (Cognitive Science)

Koç University *3.42* 2016-2020 *Istanbul, Turkey*
Bachelor of Science in Computer Engineering

University of Sussex *4.00* Spring 2020 *Brighton, UK*
Erasmus+ Exchange (Informatics)

Rice University Fall 2018 *Houston, TX*
Global Exchange (Computer Science)

American Robert College of Istanbul 2011-2016 *Istanbul, Turkey*
Science and Math, High School

Skills

Experienced with Python, PyTorch, Julia, JavaScript
Worked with React, SQL, TensorFlow, Java, LISP, C, C++, AWS, GCP, Spark, Hadoop
Natural Languages English, Turkish
Graduate Coursework Machine Learning & Pattern Recognition, Machine Learning Practical, Deep Learning Natural Language Processing 1 & 2, Reinforcement Learning, Algorithmic Game Theory

Work

Koç University Artificial Intelligence Laboratory *Istanbul, Turkey*

Research Assistant | Code | Paper *June 2019 - Aug. 2019*

- Developed an open-source package that transfers pre-trained deep learning models from PyTorch & TensorFlow to Julia. The software reconstructs each individual layer and connects them as a computational graph which can be modified, re-trained or used for inference.
- The package is mostly used by Julia developers to import popular models for fine-tuning, without having to implement models from scratch. After the release I have mentored two other research assistants to maintain the project.
- The project was supervised by **Prof. Deniz Yuret**, the founding director of the laboratory.

Miletos Co. *Istanbul, Turkey*

Machine Learning Intern *June. 2018 - Jul. 2018*

- Worked with the R&D team to solve the OCR task of converting images of receipts into text. Experimented with various CNN architectures using PyTorch and reported performance metrics. Also helped the team with data labelling.

Research

Studying Compositional Generalization in Virtual Environments *The University of Edinburgh*

MSc Dissertation | Code *June 2021 - In Progress*

- Currently developing an interactive browser game that will be used as a virtual environment for Cognitive Science and Reinforcement Learning experiments. The environment is built as a web application using React, allowing researchers to design & launch experiments without having to touch the source code. The project will end with a data analysis phase, using the collected behavioral data to test a cognitive hypothesis.
- The dissertation is supervised by **Dr. Christopher G. Lucas.**

Position-Aware Neural Attentive Graph Networks for Multi-hop Question Answering *The University of Edinburgh*

NLP Research | Code | Paper *January 2021- May 2021*

- We open-sourced the first community version of Entity-RGCN in PyTorch (De Cao et al., 2019) and used it to solve the document-level question answering dataset WikiHop. We have also reduced the entity-graph storage requirement from 1TB to 23GB, enabling the model to run on smaller devices without sacrificing accuracy.
- The research project was supervised by **Dr. Hakan Bilen.**