# BATU HELVACIOGLU

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I am a senior year Computer Engineering student that wants to continue studying and working on Artificial Intelligence in the future. My previous research and projects on Artificial Intelligence were focused on data limited tasks both in computer vision and natural language processing.

#### **EXPERIENCE**

JULY 2021 - PRESENT

#### **R&D ENGINEER INTERN, YAPI KREDI TEKNOLOJI R&D NATURAL LANGUAGE PROCESSING**

I researched a variety of topics in NLP. My work on sentiment and emotion analysis is being used in big data analytics. I contributed to "Long Form Question Answering Dataset Creation Using Noise Added Siamese BERT" paper published in October 2022. I am working on a named entity recognition system. Outside of NLP I improved the performance of an object detector based document processing system with data augmentation.

**AUGUST 2020 – NOVEMBER 2020** 

**PROJECT MANAGEMENT AND** 

## **SOFTWARE DEVELOPMENT INTERN, INVITELECOM**

I developed and implemented a plan to improve the quality and quantity of collected data with the end goal of better data driven decision making at the company. I also worked on bug testing, ASO (app store search optimization) and Apple Search Ads advertisement.

#### **EDUCATION**

SEPTEMBER 2018 - JUNE 2023 (EXPECTED GRADUATION)

## KOC UNIVERSITY, COMPUTER ENGINEERING, BUSINESS ADMINISTRATION

I have entered Computer Engineering at KOÇ UNIVERSITY by placing 2077<sup>th</sup> out of ≈2,126,000 students in the national entrance exam (YKS). I am double majoring with Business Administration and have a current GPA of 3,60. I took Introduction to Artificial Intelligence, Introduction to Machine Learning, Reinforcement Learning, Computer Vision with Deep Learning and Unsupervised Deep Learning elective courses. I am in the process of taking Deep Learning elective course in order to complete the Artificial Intelligence track program. During my undergraduate final project, I developed the AI components of Computer Vision Based Web Scraper which includes image classifier, object detector and sentiment analysis model.

**SEPTEMBER 2013 - JUNE 2018** 

#### **ROBERT COLLEGE, HIGH SCHOOL**

I entered Robert College by placing  $33^{rd}$  out of  $\approx$ 1,112,000 students in the national entrance exam (SBS). I graduated with a GPA of 89.73

## **PUBLICATIONS**

Çekiç, Tolga, Yusufcan Manav, Batu Helvacıoğlu, Enes Burak Dündar, Onur Deniz and G. Eryigit. "Long Form Question Answering Dataset Creation for Business Use Cases using Noise-Added Siamese-BERT." KDIR (2022).

## PROJECTS AND REPORTS

Reports of the projects can be accessed with this link.

- BERT based Sentiment and Emotional Analysis model used in analyzing Turkish customer service channel messages.
- Python service for QA system used as a help desk.
- Few-shot Turkish Named Entity Recognition, ongoing.
- Computer Vision Based Web Scraper Undergraduate thesis project Fall 2021.
- Car Parking Occupancy Detection with object detector Computer Vision with Deep Learning course term project Fall 2021.
- GAN based User Behavior model for reinforcement learning based recommendation systems –
  Unsupervised Deep Learning course term project Spring 2022.
- Reinforcement learning based Stock trading algorithm that utilizes two models trained on short and long term data respectively that influence each other with intrinsic reward mechanism – Reinforcement Learning course term project Spring 2021.
- Exploration of activation functions' and normalizations' effects on direct feedback alignment (an alternative to backpropagation that is more parallelizable), ongoing – Deep Learning course term project Fall 2022.
- Neural Networks and Spiking Neural Networks Academic Writing course final paper written for a technical but not expert audience Fall 2019.
- Tesla Company Governance article Robert College Business English course May 2017.

## **ACTIVITIES**

I am comfortable using English in my daily life and academic life. I am a member of the maker club (TunnelX Makerspace) at Koç University. In high school I was part of the basketball team.

# **SKILLS**

- Python, Java
- NumPy, matplotlib, Pandas, Torch, TensorFlow, Scikit learn libraries.
- Word and Excel

- Git. SQL
- Linux and Windows
- Quick learner and responsible
- English