Ari Nubar **Boyacıoğlu**

MASTER'S DEGREE GRADUATE IN COMPUTER SCIENCE WITH AI SPECIALIZATION

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Experience

Karlsruhe Institute of Technology, Institute IAR, Artificial Intelligence for Language Technologies Lab (AI4LT)
Karlsruhe, Germany

STUDENT ASSISTANT
Mar. 2023 - Aug. 2023

- Developed a streaming bot that automatically joins internal Zoom calls and streams to the Lecture Translator system to be processed simultaneously.

Karlsruhe Institute of Technology, Institute AIFB, Critical Information Infrastructures
Karlsruhe, Germany

STUDENT ASSISTANT
Nov. 2021 - Aug. 2023

- Supported in the implementation of a blockchain-based academic document publication platform by building and testing smart contracts with Truffle and Ganache.
- Developed various scripts to automatically communicate with the IPFS-Cluster regarding the population and management of data.
- Implemented a highly customizable automatic cover page generation system and integrated into the thesis submission pipeline.
- Implemented automation scripts for tasks like collecting research papers following forward and backward search patterns, extracting tabular information, reshaping them via NumPy and Pandas and saving into Excel files.

Education

Karlsruhe Institute of Technology (KIT)
Karlsruhe, Germany

M.S. IN COMPUTER SCIENCE
Oct. 2020 - Nov. 2023

- Graduated with a specialization (profile) in **Artificial Intelligence**.
- **Master's Thesis:** Neural Machine Translation between the Endangered Language Western Armenian and English
  - Built the first neural machine translation system for Western Armenian with multilingual support, which is based on Meta's "No Language Left Behind" model.
  - Created a parallel corpus that includes ca. 150,000 Western Armenian-English parallel translation examples and covers a fair range of domains.
  - Evaluated zero-shot performance of SOTA MNMT models on Western Armenian.
  - Investigated the effect of several low-resource language handling techniques on Western Armenian.

Karlsruhe Institute of Technology (KIT)
Karlsruhe, Germany

B.S. IN COMPUTER SCIENCE
Oct. 2015 - Sep. 2020

- **Bachelor's Thesis:** Investigating the Change of User Behavior in Smartphone Usage and Importance During Social Distancing Caused by COVID-19
  - Conducted a longitudinal study about the change in smartphone usage behavior of groups of individuals in Germany and Turkey during the COVID-19 pandemic in 2020.
  - Processed and analyzed the data with statistical tools.
- **Practice of Software Development:** End-to-end design, documentation, development and deployment of a data visualization software with a team of 5 students.
  - Set the standards for documentation and presentation to ensure a product of professional quality.
  - Carried out task assignment, supported in tasks that required additional workforce, and took initiative in critical situations.

Personal Projects

Extension of Western Armenian-English Parallel Corpus

- Development of a Western Armenian - English bitext miner.
- Searching for new sources of parallel texts, both online and offline.
- Development of data processing pipelines for the smooth integration of new resources.

Automation Software for Games

- Used image processing and OCR tools to gather information from the screen.
- Gained experience to handle larger actions with smaller predefined routines.
- Built a Captcha solver system with two layered approach: Image Recognition Model based on YOLOv4 falling back to pixel-based inspectional algorithm when it fails.

Focus Areas

NLP · Machine Translation · LLM · Speech Recognition · Computer Vision · OCR · Data Processing, Analysis & Visualization

Skills

Programming	Python, JavaScript, SQL, Solidity, Java, C, Haskell, LaTeX
Frameworks	PyTorch, Fairseq, HuggingFace, Tesseract-OCR, Pandas, NLTK, Scipy, NodeJS, Truffle, Ganache, MongoDB
DevOps	Docker, Git
Back-end	Django, Flask, REST API
Front-end	React, HTML5, SASS
Languages	Armenian, Turkish, English, German, Italian
Soft Skills	Analytical Thinking, Deep Focus, Eager to Learn, Initiative-Taking, (Non)-Technical Communication, Public Speaking, Team Player