Yeganeh Kordi

☎ (+98) 912 017 2481 • ✉ yegane.kordi@gmail.com • 🌐 yeganehkordi.github.io

in yeganehkordi • ⓞ yeganehkordi • 🐦 yeganekordi

EDUCATION

Bachelor of Science(Double degree) — 2016–2021
Amirkabir University of Technology — *Tehran-Iran*

- Electrical Engineering — *2016–2020*
  - Major: Control Systems
  - GPA: 3.84/4
  - Class Rank: 3/40 in Control Group, 14/160 in Electrical Engineering
  - Thesis: Designing the hardware for 3D gaze tracking
    Advisors: Mohammad Bagher Menhaj, Mohammad A. Khosravi

- Computer Engineering — *2018–2021*
  - Major: Artificial Intelligence
  - Minor: Computer Networking
  - GPA: 3.78/4
  - Class Rank: Among top 10%
  - Thesis: Implementing a 3D eye-tracking software
    Advisor: Mohammad Rahmati

RESEARCH INTERESTS

I am broadly interested in AI, Machine Learning, and NLP, particularly, I'm interested in building machines that can follow human instructions, improving the performance of models in zero-shot and few-shot settings, and moving toward generalization and unification.

PUBLICATIONS

- Super-NaturalInstructions: Generalization via Declarative Instructions on 1600+ Tasks
  ◇Yizhong Wang, ◇Swaroop Mishra, ♣Pegah Alipoormolabashi, ♣**Yeganeh Kordi**, ..., Chitta Baral, Yejin Choi, Hannaneh Hajishirzi, Noah A. Smith, Daniel Khashabi
  EMNLP, 2022
  ◇ Co-first authors; ♣ Co-second authors, alphabetical order.
- UnifiedQA-v2: Stronger Generalization via Broader Cross-Format Training.
  Daniel Khashabi, **Yeganeh Kordi**, and Hannaneh Hajishirzi
  arXiv preprint arXiv:2202.12359.

RESEARCH EXPERIENCE

- *Allen Institute for AI* and *H2lab at University of Washington*
  Mentors: Daniel Khashabi, Yizhong Wang
  Collaborating on NLP research projects, including — July 2021–present
  - UnifiedQA v2
    - We have created a cross-format QA model using the same process as UnifiedQA, but with more supervision. This results in better transfer between different QA variants and generalization to unseen datasets. In addition, this leads to better in-domain and cross-domain results.
  - Super-NaturalInstructions
    - We introduced the SUPER-NATURALINSTRUCTIONS benchmark, which consists of 1,616 diverse NLP tasks and their expert-written instructions. We also built Tk-INSTRUCT, a transformer model trained to follow various incontext instructions, which outperforms existing instruction-following models on our benchmark.
  - Language Models Self Instructing
    - We proposed a self-training approach that uses a Pre-trained LM to generate a large number of instructions and their desired outputs and then fine-tunes the model with the generated data. (paper under preparation)

- *JHU Center for Language and Speech Processing*
  Mentor: Daniel Khashabi
  Collaborating on NLP projects: August 2022–present
  – Web Instructions
    · We created a benchmark and model for instructions in HTML layout. This can be used as a challenge for language models and optimizing the crowdsourcing process. (paper under preparation)
- IT lab at university of Tehran
  Mentor: Mohammad Sayad Haghighi
  Several projects and researches, including but not limited to: June 2019–July 2021
  – Estimating bias in Trust Management systems
  – Implementing a NFC Print Management system for the department
  – Working on different approaches to adapt the 3d eye tracking software for medical applications

TEACHING EXPERIENCES

- Teaching Assistant
  – Machine Learning   Fall 2021 - Fall 2022
    · Instructor: Dr. Seyedin (Amirkabir University of Technology)
  – Data Mining   Fall 2021
    · Instructor: Dr. Amirmazlaghani (Amirkabir University of Technology)
  – Algorithm Design   Fall 2021 - Winter 2022
    · Instructor: Dr. Bagheri (Amirkabir University of Technology)
  – Cloud Computing   Spring 2021
    · Instructor: Dr. Javadi (Amirkabir University of Technology)
  – Digital Logic Circuits   Fall 2020-Fall 2021
    · Instructors: Dr. Sedighi, Dr. Saheb Zamani (Amirkabir University of Technology)

HONORS

- Ranked 148th in university entrance exam, among more than 70,000 participants.
- Ranked 19th in university graduate entrance exam, among more than 5,000 participants.
- Granted admission from the Talented Student Office of the Amirkabir University of Technology for double degree program.
- Granted direct admission from Talented Student Office of the Sharif University of Technology, Amirkabir University of Technology, and Tehran University for graduate study.
- Member of Iran's National Elites Foundation.

PROJECTS

- Implementing a Persian search engine from scratch
  – In this project, I have used a dataset of 7000 news articles and scored the documents using TF-IDF. I have also built a k-NN Similarity Search Engine based on this data.
- Implementing of 3D eye tracking method for use in medical experiments.
  – In this project, we set up a proper 3D gaze-tracking project. Then, we designed a headset with eye cameras that are equipped with infrared illuminations. Also, we designed software to collect the hemispherical strabismus scanning and turned it into a real patient test in eye clinics.
- Research paper classification system
- Persian Twitter sentiment analysis

COMPUTER SKILLS

- **Programming Languages:** Python, Java, C/C++
- **ML and NLP:** SpaCy, NLTK, Hugging Face Tokenizers and Transformers, Fairseq, pandas, Sklearn, TensorFlow, Keras, OpenCV, CUDA, Matplotlib, NumPy
- **Web-development:** HTML, CSS, JavaScript, Flask, Django
- **Databases:** MySQL, PostgreSQL
- **Hardware:** ARM, FPGA, VHDL, Verilog, Altium Designer, Proteus Design Suite
- **Cloud Computing:** Hadoop, HAProxy, Kubernetes, Docker
- **Developer Environments:** Jupyter, Colab, IntelliJ, Eclipse, PyCharm, VSCode

- **Other:** Matlab, Git, ROS, Gazebo, Wireshark, OMNeT++, VM VirtualBox

POSITION OF RESPONSIBILITY

- Member of Technical Committee in IranOpen RoboCup Competition 2018
- Member of Student Scientific Association of electrical engineering at Amirkabir University of Technology

LANGUAGE SKILLS

- Persian: Native
- TOEFL (2021): Internet-based Test, 99/120.
  Reading (28/30), Listening (26/30), Speaking (23/30), Writing (22/30)

❶ References, Further information, and Proofs are available upon Request