Ahmed Hamdy Nouraldeen Abdellah

+447586973404 | ahmed.h.abdellah@gmail.com | linkedin.com/in/ahmedhamdy3 | github.com/Ahmed-H-N

Education

University of Edinburgh — United Kingdom
Master of Science (M.Sc.) in Speech and Language Processing | *Ongoing* — Sep 2020 – Aug 2021

Assiut University — Egypt
Bachelor (B.Sc.) in Electrical Engineering, Computers and Control Systems | *Distinction* — Sep 2013 – Jul 2018

Implemented Papers

Section 4 of *Improving Lexical Choice in Neural Machine Translation* | *PyTorch* — Mar 2021
- Incorporated lexical model to enhance neural machine translation from German to English
- Corpus BLEU score increased from 11.11 to 12.68

Projects

Self-supervised learning of speech representations across languages. (Dissertation) | *PyTorch* — Jun 2021
- In this project I will investigate a method for speech representation learning that circumvents the need for negative samples and contrastive learning, but which still avoids the need for reconstructing the original input. .
- Aim of this project will be to evaluate BYOL on different languages and in different domains such as conversational and noisy speech.

Designing Intelligible TTS for Railway Stations Announcements | *Festival, HTK, Python* — Apr 2021
- Designed domain specific script for railway stations.
- Applied speech augmentation to mimic railway station's noise.
- Inspected modification of sound properties to achieve intelligibility
- Designed listening test to measure intelligibility.
- System achieved a 2.7 word rate error.

Measuring Biases Embedded in Sparse Word Vectors Trained on Twitter Data | *NLTK, Numpy* — Dec 2020
- Investigated cosine similarity and Euclidean distance for computing word similarities from sparse word vectors.
- Investigated using Singular Value Decomposition (SVD) to reduce gender bias or religion-related stereotypes.

Technical Skills

Languages: Python, C/C++, Bash, R
Developer Tools: Git, TravisCI, Jupyter Notebook
Libraries: Pytorch, NLTK, Scikit-Learn, Pandas, NumPy, Matplotlib
Fields: Machine Learning, Data Mining and Visualization, Speech and Language Processing

Student Activities And Volunteering Experience

Founder and Organizer of SLP-Talks (MSc Alumni Talks) — Jan 2021 – Aug 2021
Student Representative of the MSc Speech and Language Processing Cohort — Sep 2020 – Aug 2021
Student Advocate for the AI Programming with Python Nanodegree| Udacity — Nov 2019
Organization Member in Charity Organization (live for the people) — Sep 2016 – Aug 2017
Educational Video Maker| Youtube — Oct 2014 – Aug 2016
Co-Founder of Book-Club at Engineering Faculty in Assiut University — 2014

Awards

Leadership in Student Opportunities Edinburgh Award — Apr 2021
Distinctive Students Award in Faculty of Engineering in Assiut University — 2013 – 2018
Top 5 Ideal Students in Assiut University — 2016
Gold Medal in Mathematics Competition For Schools in Saudi Arabia — 2008

Achievements

Full Mark at Arabic Final Exam at 2nd Year of "Thanawya Amma" in Egypt — 2012
- A prestigious achievement in Egypt because it is almost impossible to get full mark in this exam
- Only 0.06% of the students got this mark (300 students out of 500,000)