Ahmed Ismail

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Work Experience

Nov. 2020– Present
Natual Language Processing Engineer, *Agolo*.
Working on text summarization and knowledge graph technology.

Mar. 2019– Oct. 2020
Data Scientist, *DataPlus*.
Built interactive dashboards and workflows for ETL and predictive analytics using Tableau and Alteryx.

Apr.–Aug. 2018
Google Summer of Code Student, *Distributed Red Hen Lab*.
Implemented an **Arabic speech recognition** system for broadcast speech data and an **Arabic dialect identification** system using *VariKN*, *Kaldi*, *Scikit-learn*, and *Keras*.

Nov. 2017– Nov.2018
Research Assistant, *Cairo University*, Faculty of Engineering.
Worked on **Senteech**, a **speech emotion classification** project for assisting customer service quality assurance teams through locating calls with negative sentiment using. This involved building a pipeline for audio processing, feature extraction, model training, and inference using *Scikit-learn*, *Tensorflow*, and *openSMILE*.

Sept. 2016–Aug. 2017
Machine Learning Researcher, RDI *Egypt*.
○ Worked on project **Hafss**, a pronunciation training system for teaching the recitation of the Holy Quran.
○ Improved **mispronunciation detection** accuracy by increasing the size of the training data, experimenting with different machine learning models using Kaldi, and enhancing the *C++* lattice generation toolkit.
○ Developed *.NET* toolkits for the linguistics and data entry team.

Education

Jun. 2024
M.Sc in Computer Science, *Cairo University*, Faculty of Computers and Information.
Thesis: "Enhancement of Mispronunciation Detection Using Deep Learning Techniques": Introduced E2E-R, a pronunciation scoring model that utilizes a pre-trained self-supervised learning model in an end-to-end architecture, reducing the required amounts of L1 training data and computational power.

Jul. 2018
Udacity, *Deep Learning Nanodegree*.
Took deep learning classes and built projects using NLP, computer vision, and RL models.

May. 2016
B.Sc in Computer Engineering, *Cairo University*, Faculty of Engineering.
○ **Graduation Project**: **"Animtractor"**, a marker-less, non-"depth camera"-assisted system for motion capture. The project won first place in Microsoft ImagineCup's 2016 national finals (Innovation track).
○ Prepared cloud computing coursework and summer training in "CMP303B - Distributed OSs".
○ Served as an Academic Committee Member in IEEE, Cairo University Student Branch.
○ After graduation: Worked as a TA in "CMP302 - Advanced Algorithms".

Skills

Languages: *Python, Java, C++, SQL, Bash*.

Tools and Libraries: *PyTorch, Keras, Tensorflow, Scikit-learn, Kaldi, LangChain, Tableau, Alteryx*.

Languages

Arabic (native) and English (proficient).