Reem Gody

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EXPERIENCE

University of Texas at Austin— *MSc Student*

January 2021 - December 2022

I did my masters in computer science in the online program offered by the University of Texas at Austin. I have taken courses in Deep Learning, Natural Language Processing, Machine learning, Parallel Programming, Virtualization, Quantum computing, Android Programming, and Online Learning and Optimization. I have done my thesis as part of the **SALT** lab at UT Austin, where I have worked on unsupervised techniques for data selection for fine-tuning self-supervised speech models for Automatic Speech Recognition.
I am currently pursuing a Ph.D. in speech and language technologies.

Current GPA: 3.9

Microsoft Advanced Technology Lab — *Data Scientist II*

Current - Since August 2019

I am currently working as a data scientist. My main focuswas on speech technologies. I have worked on Automatic speech recognition (ASR), mainly training acoustic models, language models, and rescoring models. I also contributed to enabling LTS and ITN for Arabic locales. I was the main contributor to enabling code-switching between North African and French on azure cognitive speech services. Now, I am part of the team working on the notification experience of the Bing Super App and Microsoft Start.

Mentor Graphics — *Intern*

August 2018 - September 2018

I worked as an Intern in the TLM team. During my internship, I worked on embedded Linux builds for *Zinq7000*. I also worked on upgrading tests for the core to work in AT mode.

EDUCATION

Faculty of Engineering, Cairo University — *Graduate*

September 2014 - August 2019

Major: Computer Engineering

Overall Grade: Excellent

Top of class

Score: 93.64%

Hackathons

Microsoft Hackathon 2021: 2nd place on local site

University Code sprint on Hackerrank 2018

Goldman Sachs code sprint 2017

LANGUAGES

Arabic: Mother language

English: Fluent

French: Basic

Accounts

Github: phantomcoder1996

Linked in: https://www.linkedin.com/in/reem-gody-5263b012a/

Webinars

I was a speaker in a webinar that was hosted to teach users about Arabic Azure speech services

PUBLICATIONS

- Gody, Reem, and David Harwath. "Unsupervised Fine-Tuning Data Selection for ASR Using Self-Supervised Speech Models." ICASSP 2023-2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). IEEE, 2023.
- Abdel-Salam, R.; Gody, R.; Maher, M.; Hosny, H. and Kaseb, A. (2022). AnimaChaotic: AI-based Automatic Conversion of Children's Stories to Animated 3D Videos. In Proceedings of the 14th International Conference on Agents and Artificial Intelligence - Volume 2, ISBN 978-989-758-547-0, ISSN 2184-433X, pages 226-235.

ACADEMIC PROJECTS

SuperTuxKart Hockey Playing agent

An AI agent that plays ice hockey in a 2-on-2 setting in the SuperTuxKart environment. The agent used a hybrid approach: A finite state machine for the controller and A CNN for object detection.

Technologies: python, PyTorch, deep learning, computer graphics

X-Attention

A system used for Question Answering built on ideas from BIDAF and trained on multiple combinations

Of datasets of different domains: newsQA, bioASQ, and SQuAD to perform well in cross-domain settings.

Technologies: python, PyTorch, NLP, deep learning

AnimaChaotic — *Graduation project*

A tool for converting text to animated 3D videos.

Technologies: python, MongoDB, panda3d, blender, nltk, spacey, computer graphics, NLP

Short demo: https://www.youtube.com/watch?v=WK83Nv5e6SU

Long demo: https://www.youtube.com/watch?v=1UUEqwQp4OM

Handwriting Recognition Application

An application that can distinguish between the writings of 3 classes of writers with accuracy 100% on IAM handwriting database.

Technologies: python

Bilevel Image Compression Application

An application that can compress binary images using quad trees, LZW, and run-length coding with a compression ratio of 70%

Technologies: C++, OpenCV