Namie, Turi Abu

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EDUCATION

Master of Science in Computer Science   September 2023 - Present

Department of Computer Science and Technology

Tsinghua University, Beijing, China

Bachelor of Engineering in Software Engineering   September 2019 - June 2023

School of Information and Software Engineering

University of Electronic Science and Technology of China, Chengdu, China

EXPERIENCE/INTERNSHIP

Intern-AI Engineer,

Hongchengyun Technology Co., Ltd (HCYTech) - onsite, Chengdu, China   October 2022 - March 2023

- Worked on:
  - Smoking detection: Trained Smoking detection model using YOLO and built smoking detection API
  - Speech Recognition API using OpenAI's whisper model

Research Assistant,

Center for Speech and Language Technologies, Tsinghua University   December 2023- present

Working on Automatic Speech recognition (ASR) and

The first ASR data creation for Oromo language

PROJECTS

Data Collection and ASR model training

Major Project as a part of research

· Scrapped text data from online sources and prepared sentences for audio data collection

· Developed an android app using flutter framework

· Collected 100 hrs speech data through the app

· Trained Automatic Speech Recognition(ASR) model using collected dataset

Leveraging LLM for Grammatical Error Correction

Major Project as a part of curriculum

· Fine-tuned language model, specifically T5-base for Grammatical error correction using publicly available .

· Developed web app demo similar to Grammarly where user can edit text and get grammar corrections.

CodeDig - Semantic Code search Engine

Web information Retrieval Course Project

· Applied web scrapping to get documents from websites

· Applied document indexing and searching using whoosh, applied BM25F algorithm for ranking retrieved documents

· Used LLM model for description generation of code snippets after chunking large code base into snippets.

· Developed demo website with flask, HTML, boostrap and highlightjs

Distributed Database System Design and Implementation

Project as part of Curriculum

· Designed distributed database system using MySQL and MinIO

· Created MinIO clusters using docker

· Implemented a web app using flask to simulate user interaction with the Cluster (Distributed database)

RESEARCH PUBLICATION

[1]. **Turi Abu**, Ying Shi, Thomas F Zheng, Dong Wang "*Sagalee: An Open Source Automatic Speech Recognition Dataset For Oromo Language*" ICASSP 2025 - 2025 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2025

[2]. LY Bayisa, W Wang, Q Wang, CC Ukwuoma, Gutem HK, Endris A and **Turi Abu**"*Unified Deep Learning Model for Multitask Representation and Transfer Learning: Image Classification, Object Detection, and Image Captioning*"International Journal of Machine Learning and Cybernetics. pp 1-21 2024

[3]. CC Ukwuoma, D Cai, ES gATI, VK Agbesi, G Deribachew, LY Bayisa, and **Turi Abu**"*Attention-Based End-to-End Hybrid Ensemble Model for Breast Cancer Multi-Classification* "Off. Publ. Direct Res. J. Public Health Environ. Technol, Volume 8, pages 23-39 2023

ACHIEVEMENTS AND CERTIFICATES

2022 Excellent International Student of UESTC	*2022*
1st prize for Academic Achievement in 2021-2022	*2021-2022*
1st prize for Academic Achievement in 2020-2021	*2020-2021*
1st prize for Academic Achievement in 2019-2020	*2019-2020*
Tsinghua University Innovation and Enterpreneurship Program	
Deep Learning Specialization - Online Coursera Course	
Flutter and Dart - The complete Guide - Online Udemy course	
Introduction to Machine Learning - Online Coursera course	

SKILLS AND INTERESTS

Research Interests	Natural Language Processing, Speech Recognition
	Deep Learning Algorithms
Skills	Programming language: Python, C/C++,
	Machine learning: frameworks and libraries such as Pytorch,
	numpy, pandas, tensorflow,
	Software Development: Frameworks for developing Mobile and web apps.
	FLutter, Flask, Django, Bootstrap
Soft Skills	Self-driven learning,
	Effective Time management,
	Ability to work in a team
Language Skills	English - fluent,
	Oromo - Native,
	Amharic - Bilingual
	Chinese - Conversational

EXTRA-CIRRUCULAR

- THUASA (African Student Association) Academic Affairs Director Fall 2024
- Volunteered to welcome new students for spring semester Spring 2024
- Global village 2024 Spring 2024
- Performed on **Different Colors, One people** cultural activity in UESTC
- 3rd Prize for Extra-curricular activities in the Academic year 202-2021 2020-2021
- 3rd Prize for Extra-curricular activities in the Academic year 2019-2020 2019-2020

REFERENCE

Available Upon Request.