

Jie Zhu

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EDUCATION

George Washington University Computer Science Master	Sep 2021 - May 2023 Washington, DC
<ul style="list-style-type: none">GPA: 4.0/4.0 (Present)	
Northeastern University Information Security Bachelor	Aug 2016 - Jun 2020 Shenyang, China
<ul style="list-style-type: none">Rank: Top 30%	

RESEARCH EXPERIENCES

Fairness HRI in restaurant environment	Mar 2022 - Present
Research intern Cognitive Robotics and AI Lab (CRAI), Kent State University	Advisor: Rui Liu
<ul style="list-style-type: none">Proposed 4 fairness issues to evaluate robot bias during interaction with people in the restaurant environment.Design two models for robot bias detection and bias mitigation. Define the reward function according to the fairness issues.Building an interactive environment and robot simulation using the MuJoCo platform.Design a questionnaire to collect data for the user study.	
Video question answering (VQA)	Feb 2022 - Present
Research intern ACTION Lab, Rochester Institute of Technology	Advisor: Yu Kong
<ul style="list-style-type: none">Proposed a method of Category and Signal encoding to improve Temporal question answering.Proposed an optimized model structure of HQGA to concatenate question representation and hierarchical video features.Set up new features representation of video and language using multimodal CLIP.	

WORK EXPERIENCES

Research of Institute of Tsinghua, Pearl River Delta	Sep 2020 - Aug 2021
Assistant Engineer(Intern) Artificial Intelligence Center	Guangzhou, China
<ul style="list-style-type: none">Collect and classify voice dataset. Design the MySQL database of 600k+ voice data.Develop Voice Conversion project and optimize the training process of AUTOVC model. Apply a patent of "<i>A method of Text To Speech based on Deep Learning</i>" during this work.Participate in TTS-relative work, including preprocessing dataset, training and deploying model, etc. Propose a method of using phoneme as the training dataset. Optimizing preprocessing with multi-processing to reduce the time from 20 hours to an hour.Programming voice evaluation module which could score different TTS model about voice quality and pronunciation.Apply about 15 relative patents and two of them are the main applicant.	
Seeking AI Co. Ltd.	Dec 2019 - Apr 2020
R&D intern R&D	Guangzhou, China
<ul style="list-style-type: none">Participate in the industrial defect detection and annotate 50k+ data in total.Design the size detection algorithm of Project Patinda to detect the defect products.Participate in code maintenance, and learn the process of code development.	

PROJECT EXPERIENCES

Implementation of Intellectual Property Management System Base on Blockchain	Mar 2020 - Jun 2020
Author	Shenyang, China
<ul style="list-style-type: none">Design the system structure by analyzing the demand of the market.Use Flask to build the website, which includes IP register, IP trade and electrical evidence generation functions.	
Fake News Information Analysis and Visualization Platform	Jun 2018 - Jan 2019
Teammate	Shenyang, China
<ul style="list-style-type: none">Checked and cleansed data, calculated similarities and extracted keywords for 10k+ copies of texts using ELMO model.Detected duplicates between new data and the database, with an accuracy rate of 92% in the screening test.	

HONORS & AWARDS

Graduate Tuition Fellowship	Aug 2022
Faculty Awards of Computer Animation	Dec 2021
The Third Prize Scholarship	Sep 2018 - Jul 2020

Skills

- Tech Stack:** Python: Three-year programming experience, familiar with PyTorch and OpenGL framework
- Languages:** TOEFL 102(24 Speaking)