

Jie Zhu

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EDUCATION

George Washington University Computer Science Master	Sep 2021 - May 2023 Washington, DC
• GPA: 4.0/4.0 (Present)	
Northeastern University Information Security Bachelor	Aug 2016 - Jun 2020 Shenyang, China
• Rank: Top 30%	

RESEARCH EXPERIENCES

Fairness HRI in restaurant environment Research intern Cognitive Robotics and AI Lab (CRAI), Kent State University	Mar 2022 - Present Advisor: Rui Liu
• 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 by collecting the trained robot data in our environment.	
• Writing Paper now	
Video question answering (VQA) Research intern ACTION Lab, Michigan State University	Feb 2022 - Present Advisor: Yu Kong
• 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 Assistant Engineer(Intern) Artificial Intelligence Center	Sep 2020 - Aug 2021 Guangzhou, China
• 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. R&D intern R&D	Dec 2019 - Apr 2020 Guangzhou, China
• 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 Author	Mar 2020 - Jun 2020 Shenyang, China
• 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 Teammate	Jun 2018 - Jan 2019 Shenyang, China
• 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: Four-year programming experience, familiar with PyTorch and OpenGL framework
- **Languages:** TOEFL 102(24 Speaking) -- Oct. 27, 2019