

Xin, Wooheum

Personal Website: <https://wooheum-xin.github.io/> | Email: xinwuhum@berkeley.edu
Harbin Institute of Technology, Harbin, 150001, P. R. China | Phone: +82-10-2771-6843

EDUCATION

Harbin Institute of Technology

B.E. in Computer Science

Average Score: 88.7/100

Core Courses:

Basic Field: *Computer Networks (98.5) | Compilation System (95) | Operating System Design and Implementation (88) | Computer Organization and Architecture (89.3) | Artificial Intelligence (89.5) | Database System (94) | Digital Logic Design (95)*
Detailed Field: *Visual-Audio Signal Processing (90) | Big Data Analysis (92.8) | Pattern recognition and deep learning (90)*

Harbin, CHINA

Aug.2019 – Jul.2023(expected)

University of California, Berkeley

Academic Exchange Program & Research Assistant

GPA: B+

Courses: *Digital Humanities and Text and Language Analysis | Intensive English Practice: Academic Vocabulary*

California, US

Jul.2022 – Oct.2022

RESEARCH EXPERIENCES

Text-Conditioned Motion Generation | Harbin Institute of Technology

Aug.2000 -Aug.2000

Advisor: Wangmeng Zuo, Professor at Harbin Institute of Technology

- The Hydra library is used for the parsing, and the dataset splits utilize the same splits as in Language2Pose (train /Val / test).
- Redefining the parameters that fit the SMPL-X dataset to the model resulted in the creation of a new dataset.
- By combining several motion-sequence embeddings using transformers, it is possible to encode the VAE's distribution parameters as in.
- Sampling from a learned distribution function of motion lengths conditional on the input text, we subsequently use a temporal variant autoencoder to synthesize a set of human actions of different lengths. (<https://youtu.be/K6r4hP5Gxzg>)
- Use the diffusion model to enhance the quality of the generated animation when generating human animation.

Companion Chat System Based on Multi-Virtual Actors | Harbin Institute of Technology

Jul.2021 -Dec.2021

Advisor: Wei-Nan Zhang, Associate Professor at Harbin Institute of Technology

- Based on BERT model, our model was successfully lightened and patented, with a performance loss of no more than 5%.
- Spring Boot, MySQL, MyBatis, Shiro, WebSocket, etc. are used to implement the backend service system.
- The gRPC framework is used to provide quick data transfer between the backend service system and our NLP model.
- Won the China International "Internet+" College Students Innovation and Entrepreneurship Competition, "ICAN" International Contest of innovation and "Challenge Cup" University Student Entrepreneurship Program Competition. (real test: <https://youtu.be/sdWNSOrbA9U> , PPT video: <https://youtu.be/r6qc6Nluk5Q>)

Development of Intelligence Car | Harbin Institute of Technology

Aug.2020 -Aug.2021

Advisor: Yi Zhang, Deputy Secretary of School of Electrical Engineering and Automation at Harbin Institute of Technology

- Handling of road components such curve control, garage identification, roundabout, ramp, three-way, and linear acceleration.
- Implementation of camera tracking control using a complete picture weighted computation.
- To make the road screen simpler to read, apply a perspective transformation and an OTSU threshold code.
- Won the National Intelligent Car competition's top honor. (<https://youtu.be/gHDI3YeUfqA>)

HONORS & AWARDS

First prize in the National Intelligent Car Competition

Aug.2021

- 2,916 teams from 482 colleges and institutions are participating in the tournament.
- The fastest solution to complete the race without leaving the track should be to build a self-identifying smart car that can recognize the road on a carefully constructed course.

SKILLS & CERTIFICATES

Standard English Tests: GRE: V162 Q170 AW4.0; TOEFL: Total 103 (Speaking 20)

Languages: Chinese (HSK level 6 - 272/300), Korean(mother tongue), Japanese(working at the Osaka hotel for a year)

Software: Sketch Up; CAD; Altium Designer; Photoshop; Premiere Pro; After Effects

Others: Certified Fund Investment Advisor, Computerized Accounting Qualification

LEADERSHIP AND ACTIVITIES

- **Vice Minister** - the International Communication Association of the Harbin Institute of Technology lecture dep.
- **Vice President** - the Harbin Institute of Technology Korean International students' union
- **Event Organizer** - Each year, the HIT BP debate tournament was able to draw in up to 100 competitors.
- **Multimedia Productor** – During 2019 and 2021. participated in the creation of more than 20 posters and videos.