

# Anke Sun

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## RESEARCH OBJECTIVE

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I am committed to advancing research in game audio and machine learning, focusing specifically on supervised machine learning for emotion recognition in interactive audio environments. This approach aims to improve the efficiency of music and sound asset management in game development, minimizing resource waste as game narratives evolve and creating a more cohesive audio experience.

I am also interested in exploring related fields such as programmatic audio in games, audio-visual integration, spatial audio, VR game audio, and immersive audio experiences.

## WORK EXPERIENCE

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### Papergames, Audio Group

Shanghai, China

*Technical Audio Designer*

Nov. 2022 – Oct. 2024

- *Infinity Nikki (UE5)*: Designed and integrated PCG tools into the client for ambient sound optimization and implemented spatial audio solutions.
- Encapsulated Audio C++ interfaces into Blueprint-callable functions.
- Developed the text-to-speech and wav.-integrate-to-game pipelines, including localization waapi tools.
- Designed and partially developed audio features for PS5 and iOS platforms.
- Conducted audio testing and debugging across platforms (PC, PS5, Android) for sound effects, voice modules, tools related music system, and audio source management.
- *Project: The Perceiver (UE5)*: Supported with engine integration, blueprint logic, and audio playback systems.
- *Path to Nowhere (Unity)*: Optimized audio and managed Wwise project branches.

### NetEase Interactive Entertainment, Unicores Audio Group

Shanghai, China

*Technical Audio Designer Intern*

Jul. 2022 – Sep. 2022

- Conducted daily audio tests for three unreleased projects and identified audio-related bugs.
- Developed tools for in-house game editors and created technical documentation.
- Optimized machine learning audio synthesis models with NetEase AI Lab.

### ByteDance, AI-Lab

Shanghai, China

*Audio Data Collection and Processing/Music Generation Intern*

Oct. 2020 – Aug. 2021

- Improved speech corpus quality, optimized speech synthesis models, and assessed recording environments.
- Managed and labeled data for music generation and created auto-mixing templates.

### Chinese National Geographic

Beijing, China

*Audio Editor Intern*

Oct. 2019 – Sep. 2020

- Responsible for the audio production of the programs *Little Explorers* and *Bilingual Encyclopedia*.
- 36 million plays in *Himalaya*, No.1 in online new product list and No.1 in children's paid list.

## EDUCATION

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### The University of Edinburgh

Edinburgh, UK

*Master of Science in Sound Design*

Sep. 2021 – Nov. 2022

- Key Courses: Audio Crafting, Creative Coding for Sound (Max/MSP), Audio Programming (JUCE & C++), Interactive Sound Environment (Wwise & Unity), Soundtracks for Screen

### Vancouver Film School

Vancouver, Canada

*Sound Design Summer Exchange Program*

Jul. 2019 – Aug. 2019

- Gained hands-on experience in Hollywood-style film sound design and game audio workflows.

### Communication University of China

Beijing, China

*Bachelor of Recording Arts (Recording Engineering Focus)*

Sep. 2017 – Jun. 2021

- Main Course: Mathematics and Physics, Acoustics, Technology of Microphone and Surrounding sound, Recording of classic music, recording of pop music
- GPA: 3.57/4.0 (87/100)
- Awards: *Excellent Student* for three consecutive years.

- Certificate: Shure Audio Course Level II in CUC.
- Publications: Analysis of Dolby Atmos Production Settings Using ProTools in *Media Forum* .

*Minored in Digital Media Arts*

*Sep. 2018 – Jun. 2019*

- Main Course: Digital Photography and Video Recording, Digital Composing Technology, Human-Computer Interaction Design, Digital VFX
- GPA: 88/100

## RELEVANT PROJECTS

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### Sennheiser Custom Microphone

- \* Designed and assembled a custom microphone from the ground up, including PCB design, schematic drawing, and component soldering.
- \* Completed final assembly and conducted acoustic testing to evaluate performance metrics, such as frequency response, sensitivity, and directionality.

### Design and Integration of Sound System

- \* Collaborated in a team of three to design a comprehensive sound system for a 40,000-seat stadium within a simulated budget of 15 million RMB.
- \* Developed a detailed proposal, including system specifications and integration plans, and presented the design in a mock bidding and defense process.
- \* Achieved 2nd place out of 5 teams, awarded a prize of 1,500 RMB.

### Audio Innovation for Accessible Films

- \* Conducted a research project focused on audio innovation for films designed for visually impaired audiences.
- \* Interviewed staff at Cathay Theatre in Shanghai, the only cinema in the city to regularly organize screenings for visually impaired audiences, to understand current production workflows for accessible films.
- \* Developed an audio-based approach, overseeing the process from film selection and audio production to broadcast and feedback collection, to improve accessibility and engagement for visually impaired viewers.

### Music Therapy Aid Project for Children with Autism

- \* Developed an interactive music therapy project designed for children with autism, integrating music generation, visualizations, and a Dancing Line gameplay component.
- \* The project's core components, including personalized music creation and visual feedback, were designed to foster emotional connection and provide a calming, immersive environment for children.

### Interactive Dual-Performance Synthesizer Box

- \* Designed and built a collaborative musical instrument using Max/MSP and Arduino, tailored for dual-user performance.
- \* Integrated buttons, knobs, and an Arduino gyroscope sensor to enable real-time control of synthesizer sounds, allowing expressive and dynamic performances.

## VOLUNTEER EXPERIENCE

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**Beijing Aerospace Science and Technology Competition Volunteer, Beijing, 2018**

**Audio Engineering Society Volunteer, New York, 2024**

## SKILLS

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**Languages:** English IELTS: 6.5

**DAWs:** Reaper, Logic Pro, ProTools

**Tools:** Wwise, Unity, Unreal Engine, Max/MSP, Pure Data, JUCE

**Programming Languages:** C++, Python, Lua, L<sup>A</sup>T<sub>E</sub>X

**Other Skills:** Piano, Graphic design (Photoshop, draw.io), Perforce, GitHub, Video Editing, Acoustical Modeling