# XINGYU GAO

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## EDUCATION

**09/2020-07/2024** | **BeiHang University (BUAA)** | **Beijing,**

**China Degree:** Bachelor of Engineering in Industrial Design

**Average Score:** 83.68/100

**Main Courses:** Information Design,  Interactive Programming, C Language

Programming, Mathematical Analysis, Software Programming, Engineering

Mechanics, Product Design.

**09/2024 - 12/2025 (Ongoing)** | **University of the Arts London (UAL)** | **London,**

**UK Degree:** Master of Science in Creative Computing

**Technical Learning:** Arduino, P5.js, Unity, Engaging Machine Intelligence, TouchDesigner.

## RESEARCH INTERESTS

**I focus on Human-Computer Interaction (HCI) and multimodal interaction design, with particular interest in emotion expression, assistive technologies, and creativity-support tools.**

➤ Multimodal Interaction & Haptics: Combine visual, auditory, and tactile signals to design intuitive

feedback systems for enhanced perception and communication.

➤ Wearable & Tangible Interfaces: Develop responsive prototypes using Arduino-based platforms to support

real-time interaction through rhythm, motion, or environmental sensing.

➤ Assistive & Inclusive Technologies: Explore the use of low-cost feedback systems in education, gaming,

and cultural contexts to improve accessibility and self-expression for users with sensory impairments.

## AWARDS AND HONOURS

**National-Level Awards**

➤ Third Prize, Mobile Application Innovation Competition, China Collegiate Computing Contest, November 2024

➤ Third Prize, 14th User Experience Innovation Competition, September 2022

**Provincial-Level Awards**

➤ First Prize, Mobile Application Innovation Competition, China Collegiate Computing Contest, November 2024

➤ Second Prize, 12th Future Designer · National College Digital Art & Design Competition, August 2024

➤ Second Prize, 11th Future Designer · National College Digital Art & Design Competition, August 2023

➤ Second Prize, 11th Beijing Industrial Design Competition, August 2023 (Two-time winner)

➤ Third Prize, 11th Beijing Industrial Design Competition, August 2023 (Two-time winner)

➤ Bronze Award, 2023 SGADC, August 2023 (Two-time winner)

**Scholarships**

- First-Class(£2,000 prize),   Pitch It Award 2025, UAL, May 2025

- First-Class Academic Competition Scholarship, Beihang University, April 2024

- Second-Class Academic Excellence Scholarship, Beihang University, April 2024

- Special Motivational Award Scholarship, Beihang University, April 2024

## PROJECT EXPERIENCES

**Music Experience System for Deaf Dancers | Undergraduate Thesis | 09/2023 - 07/2024**
**Objective:** Enhance the dance music experience through tactile rhythm feedback and emotional visualization.

- Designed an Arduino + ESP32 vibrotactile feedback system to convert music signals into tactile feedback.

- Conducted user research and field studies, identifying key needs and training limitations.

- Tested the impact of vibrotactile feedback and emotional visualization on rhythm perception and dance performance.

**Pollen Quest (Multisensory Pollen Education Game) | Course Project | 04/2025 – 06/2025**
**Objective:** Design a 2D exploration game to educate about pollen allergies through visual and olfactory feedback.

- Developed a complete multi-scene 2D game using Unity, integrating educational content and exploratory interaction.
- Implemented scent-releasing "pollen burst" effects using Arduino and custom hardware.
- Conducted user testing to evaluate interaction quality and multisensory experience design.

**Assistive Game Development | Student Research Assistant | 05/2025 – 06/2025**
**Objective:** Trained model to support gameplay accessibility for BLV users.

- Built and labeled a dataset for YOLOv8 training via Roboflow.

- Tested the trained model by integrating it into gameplay code.

**HCIX 2025 Summer Research Group | Research Member | 06/2025 – Present**
**Objective:** Participating in a pHRI + PS project (HCIX 2025), preparing early work for a potential CHI submission.

## SKILLS

**Programming Languages:** C, JavaScript, Python

**Interactive Computing:**Unity (VR/AR), Arduino, PyTorch, P5.js, Front-end

**UI/UX Design:** Figma, Adobe Photoshop (Ps)

**3D Modeling & Rendering:** Rhino, KeyShot