CASSIDY HANYU ZHANG

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EDUCATION

Hefei University of Technology (HFUT)
Bachelor of Architecture in Architecture (Five-year Program), GPA: 87.02/100 — 09/2020-06/2025

Tsinghua University (THU)
Master's in Data Science and Information Technology (in progress), GPA: 4.0/4.0 — 09/2025-Present
Currently affiliated with the Pervasive Human-Computer Interaction Laboratory.

University of Washington (UW)
Master of Science in Technology Innovation (MSTI), Robotics Track (in progress) — 09/2026-Present

AWARDS & HONORS

Recipient of more than 20 awards, including:

First-Class Academic Scholarships	2021-2023
Merit Student Awards at the University	2021-2022
Outstanding Student Leader Honor	2023

COMPETITIONS

Runner-Up, Human-Robot Interaction Student Design Challenge (HRI 2026)	03/2026
First Prize, National Finals, National College Digital Art&Design Awards	08/2024
Second Prize in the Finals, Milan Design Week - Exhibition of Excellent Works by Chinese University	06/2024
First Prize, University Student Advanced Mapping and Product Information Modeling Competition	08/2023
Second Prize, Hong Kong Youth Design Award	12/2023
First Prize, "Challenge Cup" College Students' Entrepreneurship Competition of HFUT	05/2024

RESEARCH & PROJECTS

Human-AI Interaction Research: What Stays, What Goes? — **06/2026-09/2026**

- Investigated how turn-level feedback reveals user-specific information value in multi-turn LLM discussions. The CarryForward system segments conversation history into source-aligned semantic units and uses a personalized behavior–information-type matrix to propose which information to retain.
- Enabled users to inspect and revise tiered, source-linked retention proposals; explicit corrections update subsequent predictions. Confirmed excerpts are assembled into later model inputs to align responses with users' evolving priorities.
- First author of: "What Stays, What Goes? Inferring User-Specific Information Value from Turn-Level Feedback in LLM Discussions"; submitted to CHI 2027.

Wearable Computing Project: BiteFlow — **03/2026-06/2026**

- Contributed to concept development and research framing, system and framework development, and user studies for a wrist-worn prototype that automatically logs hand-held snack consumption at the bite level.
- The system combines wrist IMU sensing and a lightweight temporal convolutional network with event-triggered camera capture, on-device image filtering, and specialized agents for bite verification, dietary estimation, and session reporting. An eight-participant study provided preliminary feedback on logging burden and report usefulness.
- Fourth author of "BiteFlow: Integrating Bite Detection into Every Second," accepted to the UbiComp/ISWC 2026 Student Challenge.

AI Agent Project: Notes Generator — **12/2025-04/2026**

- Built a proactive cognitive note-taking assistant with an intent inference engine to address fragmented notes and difficulty reconstructing logic under heavy cognitive load in academic lectures and frequent meetings.
- Modeled users' cognitive states and context to infer needs behind incomplete notes, including knowledge completion, task initiation, and logical connections. Used a Digital Human interface, LLMs, and retrieval-augmented generation (RAG) to provide personalized cognitive scaffolding.

Human-Robot Interaction Project: Circuit Breaker — **10/2025-12/2025**

- Designed and developed a smart mouse robot integrating NLP-based sentiment recognition and haptic feedback to intervene in impulsive digital violence on social media. Used a lightweight local GUM model to monitor screen content and typed text in real time.
- Applied motor-driven physical resistance to interrupt perpetrators' impulsive actions, and different vibration frequencies and directional nudges to provide reassurance or warnings to victims and bystanders.
- First author of "Circuit Breaker: A Tangible Intervention for Mitigating Digital Violence," accepted to the HRI 2026 Student Design Competition.

AIoT Project: Smart Tennis — **09/2025-12/2025**

- Built a tennis training assistant using vision and sensors to provide real-time technique correction and feedback unavailable in video tutorials. Integrated a XIAO ESP32-S3, IMU, and microphone into the racket handle to capture swing angles and vibrations associated with sweet-spot contact.
- Used Edge Impulse for digital signal processing (DSP) and model training to classify strokes in real time (forehand/backhand and high/low angles). Used an LLM to generate personalized coaching advice and real-time voice corrections as an alternative to private coaching, helping reduce injury risks from improper technique.

PROFESSIONAL SKILLS

COMPUTING: Python, C, SQL; Machine Learning and Statistical Learning; DSP; Vibe Coding

DESIGN: Figma, Photoshop, InDesign, Rhino, Grasshopper, SketchUp, V-Ray, Blender, Unity, FDM 3D Printing, Soldering, Arduino-based Prototyping