Shih Kang Chiu

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Developer ~ Engineer | crappy-action-figure.org

SUMMARY

My research area focuses on Human-Computer Interaction (HCI). I apply my expertise specifically in advanced haptic feedback for AR/ VR applications and granting novel properties to enhance user experience, for short, I engineer custom-made interactive devices.

My graduation thesis has centered on leveraging user-in-the-loop LLM to enhance real-time note-taking in mobile settings using AR headset and eye-tracking tehcnique .

I have extensive experience in Unity development. In addition to 2D and 3D games, I also have experience with VR games and applications (including Vive, Oculus, and Hololens).

I participated in various competitions and industry-academia collaborations, received multiple scholarships, and maintained well academic performance. For detailed project information, please visit my personal website.

SKILLS

Languages: C#, Python, JavaScript

Technologies: Unity, Arduino, Fusion 360

EDUCATION

8/2022 | 7/2024 — **Department of Computer Science** — **MSc**
National Chengchi University
Avg 91.41 / GPA 4.30

9/2014 | 7/2018 — **Department of International Business** — **BBA**
National Chengchi University

PUBLICATIONS

Graduation Thesis — **GazeNoter: Co-Piloted AR Note-Taking via Gaze Selection of LLM Suggestions to Match Users' Intentions.**
Shih-Kang Chiu, Bryan Wang, Hsin-Ruey Tsai
Proceedings of the ACM Conference on Human Factors in Computing Systems (ACM CHI' 25)

`HCI / LLM / AR`

Publication — **transPAF: Rendering Omnidirectional Impact Feedback with Dynamic Point of Application of Force All Round a Controller.**
Hong-Xian Chen, **Shih-Kang Chiu**, Chi-Ching Wen, Hsin-Ruey Tsai
Proceedings of the ACM Conference on Human Factors in Computing Systems (ACM CHI' 23)

`HCI / VR / Haptic feedback`

Thesis — **Prop Revolver: A forearm-worn device renders changeable props with manipulation and force feedback in XR.**
Wei-Lin Hsu, **Shih-Kang Chiu**, Hsin-Ruey Tsai
Under review

`HCI / VR / Haptic feedback`

PROJECTS

1/2024 | 7/2024 — **Delta x NTU: User-in-the-loop AI and XR Combined Human-Robot Collaboration** — **Industry cooperation**
- PI: Robin Bing-Yu Chen Co-PI: Hsin-Ruey Tsai
- Incorporating user engagement in AI and XR combined human-robot collaboration and delves into the complexities of interacting with multiple robots, various input modalities, and diverse commanding methodologies.

`HRI / LLM / VLM`

9/2023 | 8/2022 — **Freeperson: The Digital-Twins Machine** — **Digital content exhibition**
- PI: Tao Ya-Lun
- A interactive exhibition connecting two physical spaces by creating a co-located digital body of the user using an autonomous robot, a wearable prop device, and XR headset.

`HRI / Haptic feedback / Immersive design`

HONOURS & AWARDS

2023 **Academic Paper Award - College of Informatics, Academic Year 111**

- Scholarship holder

2023 **NIICC The National Collegiate Innovation Integration Competition**

- Honorable Mention
- We propose transPAF, a controller that could render omnidirectional impact feedback with dynamic Point of Application of Force (PAF) all around the controller.

2024 **Outstanding Competition Achievement Award - College of Informatics, Academic Year 113**

- Scholarship holder

2024 **Mobileheroes Global**

- Top 9 (final round)
- We propose GazeNoter, which pioneers a user-in-the-loop LLM and AR technology to achieve real-time note-taking during speech-based activity.

TEACHING ASSISTANT EXPERIENCE

2022-Fall	**Virtual Reality Haptic Interactions**	**Computer Science**
2023-Spring	**Interaction Technologies Research and Discussion**	**Computer Science**
2023-Spring	**Implementation of Digital Content and Technologies**	**Digital Content and Technologie**
2023-Fall	**Introduction to Digital Contents and Technologies**	**Digital Content and Technologie**
2024-Spring	**Implementation of Digital Content and Technologies**	**Digital Content and Technologie**
2024-Spring	**Special Projects on Digital Content and Technology**	**Digital Content and Technologie**

LANGUAGES

Chinese - native, **English** - fluent (TOEIC 910)