Kieran Waugh

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Education

2021 – 2025 **PhD, Human Computer Interaction, University of Glasgow.**
Thesis: *Improving the Usability of touchless User Interfaces*
Research: My research focuses on touchless input and its applications in interactive systems. I currently work with hand tracking and mixed reality to explore and design new hand gestures to increase usability and exhibit affordance.

2020 – 2021 **MSc By Research, Human-Computer Interaction, The University of Edinburgh.** Merit
Thesis: *Dont Touch Me! An Exploration of Interface Design for Non-Touch Systems*
Research: The thesis contributes findings from 2 experiments, from which, preliminary design recommendations for touchless user interfaces are derived. Additionally, through exploration into users mental models, I discovered that people can translate standardised 2D gestures into 3D space allowing for complex interaction with touchless systems.

2016 – 2020 **BSc Computer Science, The University of Edinburgh.** First Class
Project: *Walking and Talking: A Navigation Application for Visually Impaired Pedestrians.*
Courses: Human-Computer interaction, The Human Factor: Working with Users, Usable Security and Privacy, Software Architecture, Process, and Management, Computing in the Classroom, System Design Project, Informatics Large Practical, Software Testing, Professional Issues.

Experience, Employment History and Volunteering

2022-2024 **Assistant Technical Program Chair.** *CHI Conference 2024, (ACM) SIGCHI (Volunteer)*
Helping organise and plan the 2024 CHI conference. I am responsible for supporting the organisation and coordination of the overall conference program, outside sourcing and helping manage a large team.

2020 – ⋯ **Digital Skills Project Assistant.** *Digital Skills Education Limited*
Collaborating with the Scottish government and education Scotland/trade unions I research and trial innovative ways to expose young people to complex computer science concepts and issues by creating new and exciting online experiences. Additionally, I create and deliver workshops to coach people in cyber skills, containing interactive elements created to improve their technical competency.

2020 – 2021 **Various Teaching Roles** *The University of Edinburgh, University of Glasgow*
Including course creation, content teaching, and course marking, I worked with a mixture of undergraduate, undergraduate honours, and postgraduate courses. Spanning from first-year introductory courses to advanced MSc modules.

🔖 **Speaker.** *Informatics Connect, The University of Edinburgh*
Due to the COVID-19 pandemic, new first-year students have struggled to connect with the university. On numerous occasions, I spoke about my university experience, gave advice, and advocated for participating in research and further study.

Research Publications

1 **Waugh**, **Kieran**, Mark McGill, and Euan Freeman (2023a). "Demonstrating Proxemic Cursor Input for Touchless Displays". In: *Proceedings of the 2023 ACM Symposium on Spatial User Interaction*. SUI '23. Sydney, NSW, Australia: Association for Computing Machinery. ISBN: 9798400702815. 🔗 DOI: 10.1145/3607822.3618014. 🔗 URL: https://doi.org/10.1145/3607822.3618014.

2 — (2023b). "Proxemic Cursor Interactions for Touchless Widget Control". In: *Proceedings of the 2023 ACM Symposium on Spatial User Interaction*. SUI '23. Sydney, NSW, Australia: Association for Computing Machinery. ISBN: 9798400702815. 🔗 DOI: 10.1145/3607822.3614525. 🔗 URL: https://doi.org/10.1145/3607822.3614525.

3 — (2022). "Push or Pinch? Exploring Slider Control Gestures for Touchless User Interfaces". In: *Proceedings of the 2022 Nordic Human-Computer Interaction Conference*. NordiCHI '22. Association for Computing Machinery. 🔗 DOI: 10.1145/3546155.3546702.

4 **Waugh**, **Kieran** and Judy Robertson (2021). "Don't Touch Me! A Comparison of Usability on Touch and Non-touch Inputs". In: *Human-Computer Interaction INTERACT 2021*. Lecture Notes in Computer Science. Cham: Springer International Publishing, pp. 400–404. ISBN: 978-3-030-85607-6. 🔗 DOI: 10.1007/978-3-030-85607-6_46.

Skills

Languages	🔖 Strong reading, writing and speaking competencies in English and basic communication in Spanish.
Research	🔖 Strong skills in user research and study design. Additionally broad experience in interaction technique testing.
Coding	🔖 Java, Python, Swift, Kotlin, C#, JSON, LaTeX
Application Development	🔖 Apple Developer experience with iOS, WatchOS and iPadOS. Worked with storyboard UI and SwiftUI. Android OS Development in both Java and Kotlin

References

Professional and academic references available