

Nathan Gerard Jayy Hughes

Education	Mark
PhD in Intelligent Games and Games Intelligence (IGGI) – University of York – York 2018 - 2023	
A fully funded 4-year EPSRC scholarship. The project is under the supervision of Prof Paul Cairns, investigating the player experience of 'open world' games, specifically around choice behaviour.	
Master of Psychology (MPsych) - University of York – York 2014 - 2018	2:1
4 th Year Project: Trust in Autonomous Vehicles: How Perception Affects Proxemic Driving Behaviour	75
Research Experience	
Research Associate in Human Computer Interaction for Clinical AI, January 2023 – December 2023 <i>Assuring Autonomy International Programme, Computer Science Department, University of York</i> <ul style="list-style-type: none"> A 1-year project investigating how to design human-centred explainable AI in clinical settings. This project focuses on the task of extubating patients, and how to design AI systems that can aid doctors during this task. Current work includes conducting literature reviews on the topic of human-centred explainable AI, running interviews with doctors, prototyping user interfaces, and writing findings into publications. 	
PhD in Intelligent Games and Games Intelligence (IGGI), September 2018 – June 2023 <i>Computer Science Department, University of York</i> <ul style="list-style-type: none"> A 4-year EPSRC funded PhD investigating how players conceptualise decisions made in open world games. This project investigated what players choose to do and why, as well as understand how players describe their experiences. How to map player goals to moment-to-moment gameplay was explored, to reveal what it means to experience an open world game both in the moment and overall. Skills learnt as part of the PhD include both qualitative and quantitative analyses, running of interviews and collection of secondary data, and writing findings into journal publications. 	
Research Trainee, May 2022 – February 2023 <i>Assuring Autonomy International Programme (AAIP), University of York</i> <ul style="list-style-type: none"> A ten-month part-time research project collaboration between the National Air Traffic Service (NATS) and AAIP, involving £119,000 worth of funding to explore how to apply the Wizard of Oz technique to prototyping automated decision-making tools in Air Traffic Control, with a focus on human-machine teaming and a user-centred design approach. Experience running workshops with external partners, conducting interviews and subsequent analysis, with a focus on generating actionable insights. 	
Skills & Abilities	
Research Analysis <ul style="list-style-type: none"> Proficient with quantitative techniques using RStudio: <ul style="list-style-type: none"> Wrote scripts in R to import, tidy and aggregate raw data Computed a variety of statistical analysis including factor analysis, correlations, and ANOVAs Comfortable generating graphs using the GGplot2 package Proficient with qualitative techniques, including content analysis & thematic analysis <ul style="list-style-type: none"> Conducted interviews (both in-person and online) and transcribed data Applied analysis techniques to a variety of datasets including interviews and forum comments 	

Teaching & Research Supervision

- Graduate Teaching Assistant in the Computer Science Department, University of York (Oct 2021 – Feb 2022)
 - Assisted the Research Methods for Interactive Technologies & Design and Research Practice modules, where masters students learn how to conduct both qualitative and quantitative studies
 - Responsibilities included explaining concepts to students, engaging students in discussion, and aiding in the progress of their group projects
 - Designed and taught a lecture on questionnaire design and reporting
- Delivered a guest lecture at the University of Skövde on transparent questionnaire reporting
- Experienced marking masters level HCI module submissions from marking on the DARP module
- Supervised a masters project on how player motivation affects choices in narrative games

Research Communication

- Articulate and comfortable communicating in public and group settings across a variety of mediums
 - Examples include a TEDx talk, 3 Minute Thesis finalist at the University of York, Graduate Teaching Assistant, international guest lecturing, presenting posters of undertaken academic projects, and conference talks
- Published papers in both conference and journal outlets (e.g., Entertainment Computing and CHIPLAY)

Public & Wider Engagement

Student Representative

- Elected to represent the student body of the IGGI program at the University of York
- Elected to represent the Computer Science Postgraduate Research Community on the Graduate School Board, and the Equality, Diversity & Inclusivity committee
- Responsibilities include raising issues from students to staff, attending organising meetings, and ensuring that students feel a part of the wider community

LGBT Advocate

- Creator and Leader of an LGBTQ+ group within the University of York Computer Science department ARRAY
 - Organises monthly social meetings, runs the group email and coordinates events to raise awareness for LGBTQ+ issues within the department
- TEDx UniversityofYork student speaker - Fixing the SHELF (Apr 24th, 2016)
- Presented a talk on overcoming transgender inequalities in the UK bringing together personal experience and empirical research (<https://www.youtube.com/watch?v=JvMmPS03eX0>)

IGGI Conference Organiser, 2020

- Assisted in running the IGGI conference online, adapting to overcome the impact of COVID-19
- Created and operated the Discord group where the event took place, including assigning roles and creating appropriate rooms for talks to take place

Publications

- Jia, Y., McDermid, J. A., Hughes, N., Sujan, M. A., Lawton, T., & Habli, I. (2023). **The need for the human-centred explanation for ML-based clinical decision support systems**. In 2023 IEEE 11th International Conference on Healthcare Informatics (ICHI). IEEE.
- Hughes, N. G. J., Flockton, J. R., & Cairns, P. (2023). **Growing together: An analysis of measurement transparency across 15 years of player motivation questionnaires**. International Journal of Human-Computer Studies, 169, 102940.
- Hughes, N. G. J., & Cairns, P. (2021). **Opening the world of contextually-specific player experiences**. Entertainment Computing, 37, 100401.