

# Artificial Intelligence in Games

We welcome applications for PhD studentships in the domain of **Artificial Intelligence (AI) in Games**. We are interested in various forms of how AI can be applied to making and studying games, usually focussed on topics other than AI gameplay. Generally, we are interested in co-creativity in games, principles of computational creativity, shaping experiences and behaviours, novel applications of AI to games, and using games as a tool to better understand humans, AI and human-AI interaction.

Possible topics include, but are not limited to:

-**procedural content generation** in games, especially question on how to measure and quantify the quality and uniqueness of content, how generation influences player experience, and how modern AI techniques can be integrated into this process in a novel and fundamental way.

-the topic of **intrinsic motivations** in games: both how to use computational models of intrinsic motivation to make and play games from an AI perspective, and how to measure intrinsic motivation with games.

-generation of believable and socially focussed **NPC behaviour** – particularly focussed on lesser studied social phenomena, such as co-creativity, entrainment, etc.

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Applicants should have a strong first degree and be creative and motivated to delve into the various questions that surround AI and games, and engage with a quickly developing field. A typical applicant has an outstanding background in one or several of the following fields, or relevant industry experience: Computer Science, Game Design, AI, Cognitive Sciences, Mathematics, Psychology. Ideally, a candidate should be comfortable with programming and game literate. Knowledge about game design, current or classic AI techniques, humanity approaches to games and experience with interdisciplinary projects are desirable.

The project can be shaped towards the background and interests of the applicant. Previous work of the supervisor, Dr. Christoph Salge, gives a good idea of the range of possible topics. If you are interested and want to discuss possible topics for a research proposal (which should focus on one idea in this space), please contact Christoph Salge via email prior to submitting an application.

Christoph Salge: [c.salge@herts.ac.uk](mailto:c.salge@herts.ac.uk)

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Some recent relevant work:

- [Landmarks, Monuments, and Beacons: Understanding Generative Calls to Action](#)
- [Terrain-adaptive PCGML in Minecraft | IEEE Conference Publication | IEEE Xplore](#)
- [Exploring Minecraft Settlement Generators with Generative Shift Analysis](#)