

Master's Thesis Project: Gamification or Serious Games for Climate Adaptation Education

The [Participatory Visual Systems](#) Group at VRVis – Vienna Research Center for Visual Computing is currently looking for support from a student (f/m/d) who would like to give their master's thesis an application driven focus with the topic of gamification or serious games for climate adaptation education.

The Participatory Visual Systems group focuses on the development of interactive, collaborative, and immersive urban planning workflows accessible to a broad range of users. Our goal is to offer a novel approach to climate-sensitive urban development and climate change mitigation through intuitive immersive and interactive tools that will foster collaboration, communication and public participation in the planning process.

Within this bigger scope, this project focuses on engaging and educating the general public on the topics of heat-stress and urban climate adaptation with the help of gamification or serious games.

Gamification is being used extensively in education and has been applied in many other domains, among them sustainability¹ as well as public participation². The related but distinct concept of Serious Games has also been studied in conjunction with climate issues and engagement³.

The aim of this project is to design and develop either an application with gamification or a serious game (or a series of mini-games to compare different game concepts) on the topic of heat stress and climate adaptation, depending on your interests.

One option is to use a handheld weather station to measure temperature, humidity, wind direction, and wind speed. We currently have a prototype that displays a dashboard based on live data from the weather station to raise awareness of urban heat. This could be extended and gamified during the course of this project. However, we welcome novel ideas and are open to any technology you might prefer to use.



What your tasks will be

- Design concepts for serious games, or an application with gamification elements on urban heat and climate change adaptation awareness
- Implementation of a prototype
- Evaluation of the prototype (Userstudy)

What you will bring to the team

- Interest in game design and/or gamification (experience is of course a bonus!)
- Creativity
- Solid programming skills – depending on the technology you choose our support might be limited

What we offer in return

- Very friendly and supportive work atmosphere
- Flexibility, and well-equipped work space
- Excellent professional support by our team
- Opportunity to access our network of university partners (e.g. for thesis supervision)
- Appropriate remuneration upon successful (thesis) completion

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¹ [Gamification for sustainability: A systematic review of applications, trends, and opportunities](#)

² [Gameful civic engagement: A review of the literature on gamification of e-participation](#)

³ [Adaptive and interactive climate futures: systematic review of 'serious games' for engagement and decision-making](#)