# Virtual Reality Fear

Virtual Reality has been used to successfully treat phobias. What has been less explored is inducing fear in participants without phobias. In light of this, our project aimed to contribute to the literature by creating a virtual environment, in collaboration with the UCT Psychology Department, that elicited fear in participants without phobias. A visualization tool was also created in order to analyse the physiological data collected from participants, and confirm that participants were in fact afraid during the virtual experience.

## VIRTUAL ENVIRONMENT Visualisation Tool

### **Objectives**

- Design and create a virtual environment ulletthat elicits fear in participants without phobias
- Conduct a study evaluate the efficacy of ulletthe virtual environment

### **Objectives**

- Create a visualisation tool for the UCT Psychology Department to analyse and visualise physiological data
- Perform a heuristic evaluation to test the usability of the tool





### **Evaluation Study**

- subjects Within design with 11  $\bullet$ participants
- Heart Rate, Skin Conductance, Self  $\bullet$ Manikin Assessment and Discrete Emotions Scale used to measure emotion

### **Heuristic Evaluation**

- Evaluators were asked to find at least six problems with the application and give each problem a severity rating
- Evaluators also rated the usability of the application

### Results

- Statistically significant increase in Heart  $\bullet$ Rate and Skin Conductance
- Significant self-reported fear and surprise  $\bullet$
- Significant increase in arousal but no  $\bullet$ significant decrease in valence

### Results

- The application was deemed reasonably usable by the evaluators
- Evaluators were not satisfied with the  $\bullet$ error prevention of the application



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