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## Student Internship Subjective Testing Within Interactive Audio Virtual Environments

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### Description:

Subjective testing is an important milestone in developing new audio rendering techniques for virtual reality (VR). Recently, more papers have begun exploring subjective testing within the VR environment, enabling new and exciting ways of assessing how users perceive audio quality [1]. This internship will focus on designing and programming a flexible toolset to assist in streamlining the test setup procedure. The goal is to make an intuitive Python interface that can handle all the dependent and independent variables and construct the required paradigm set up for use in other software. Implementation inside unity will focus more on the user interface of the test and how subjects can control various interactions and explore the virtual world.

### Tasks:

- Familiarization with test requirements.
- Implement a basic class system in Python environment to handle audio files, user input via a graphical user interface and construct .json files for parsing to external software.
- Optimizing test manager and actions scripts in Unity game engine (C# programming) to handle the testing during run-time.

### Your profile:

- Python and C# Programming skills (basic – intermediate level).
- Eager to learn about VR and audio quality evaluation.

### You will gain:

- Opportunity to learn/ improve coding and programming skills and contribute to an ongoing project
- An **open** and **cooperative** working environment.
- Knowledge in **subjective test design** and **implementation**.
- **Practical experience** with using VR hardware and software.

Weekly hours are negotiable ranging from 10h to 20h / week.

### Interested?

Please apply for this position using the following link:

<https://recruiting.fraunhofer.de/Vacancies/60152/Description/2>.

Please include a cover letter, your CV and your latest transcripts of records (as PDF) and quote ID number 60152-AME.

Please let us know how you learned about this job opportunity.

Additional information is available on our website: [www.iis.fraunhofer.de/en](http://www.iis.fraunhofer.de/en)

[1] O. Rummukainen, T. Robotham, S. Schlecht, A. Plinge, J. Herre, E. A. P. Habets, "Audio Quality Evaluation in Virtual Reality: Multiple Stimulus Ranking with Behavior Tracking". *AES International Conference on Audio for Virtual and Augmented Reality Displays*, Redmond (WA), USA, 2018