

Master Thesis

Designing Gaze-based Task Resumption Support for Mixed Reality Environments

Problem Description

Nowadays employees are often distracted by interruptions originating from different sources such as notifications, phone calls, etc. These are referred to as external interruptions whereas internal disruptions occur due to own thoughts such as thinking about vacation, home, etc. Interruptions can have multiple negative effects on users. Specifically, studies have shown that interrupted tasks are not resumed right away and resuming the primary work requires cognitive effort. Interruptions may also happen while users are working with mixed reality (MR) tools such as Microsoft HoloLens. Traditionally, mouse and keyboard actions are used to detect the interruption and design support for resuming the primary task. However, by using the integrated eye-tracker on HoloLens 2, eye-movement data can be considered as a valuable source for designing task resumption support. Our previous research showed that using eye-based task resumption support can have positive impact on users. However, it is not clear how to design such support in MR environments

Goal of Thesis

- Identify possible interruption while working with mixed reality tools
- Develop eye-based task resumption support
- Design an experiment to evaluate the effects of the suggestion solution
- Report the evaluation results

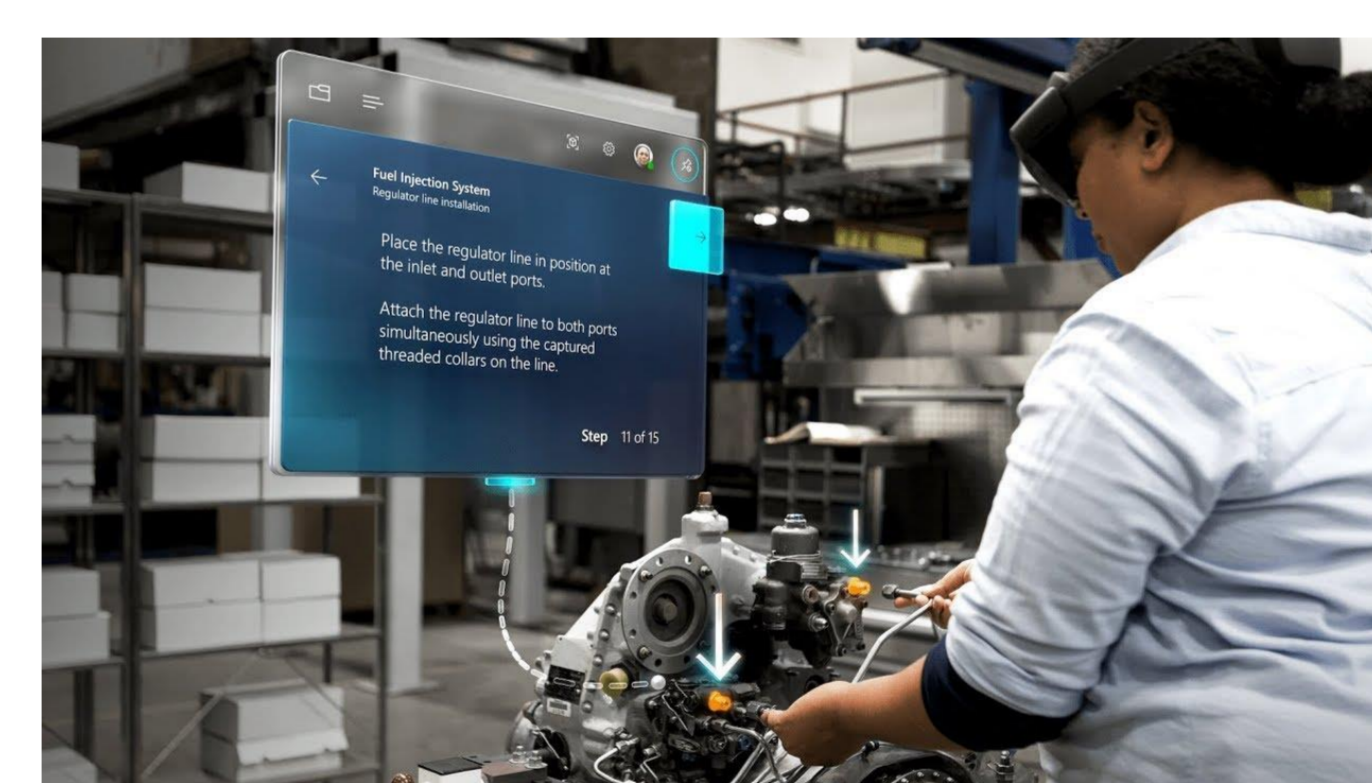
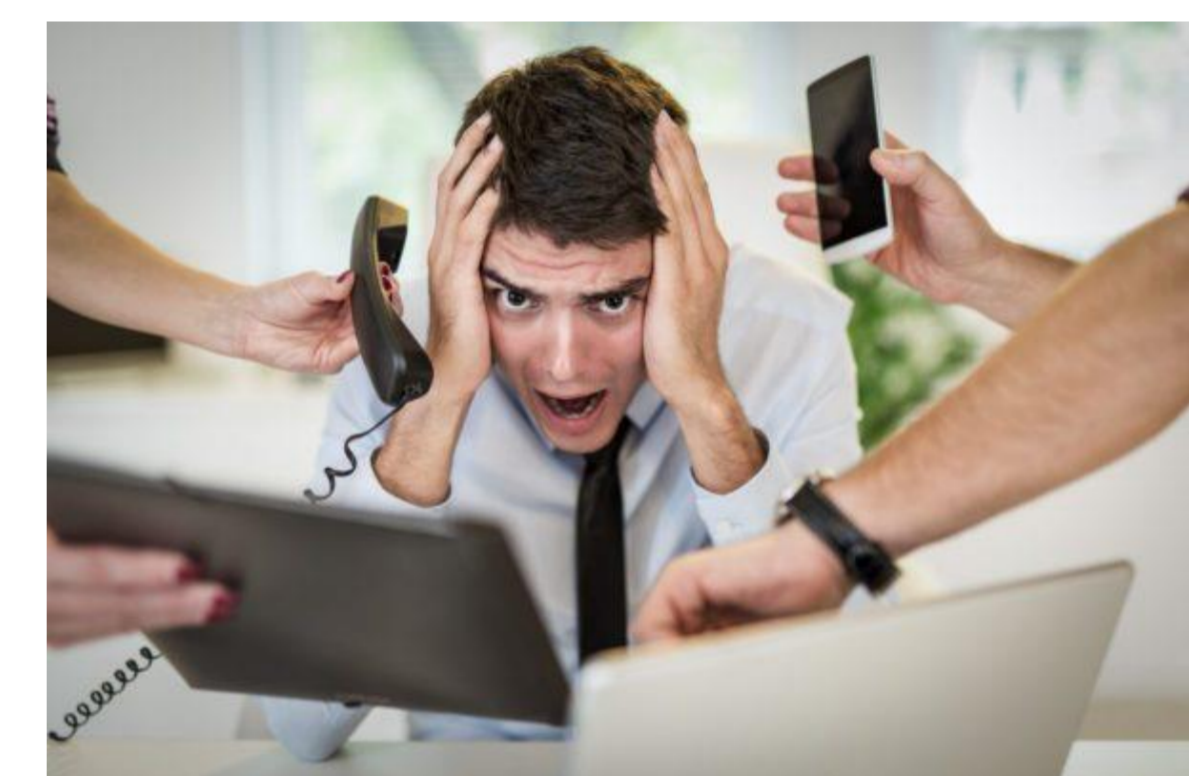
Requirements

- Strong time management and communication skills
- Strong analytical skills
- Have some programming skills and high **motivation to improve programming skills (e.g, Java or C#)**
- Interest in cutting age technologies
- Good English skills

Contact



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Microsoft HoloLens

