

## INTRODUCTION

- Semi-autonomous driving is increasingly prevalent
- Drivers are likely to engage in secondary tasks, such as audio learning
- Questions:
  - How might TTS (text-to-speech) audio learning affect semi-autonomous driver?
  - How strenuous is audio learning in a semi-autonomous driving environment?

## METHOD

### Design & Materials (n=80)

Within-subjects design with three conditions: 1) Driving Only, 2) Listening Only, and 3) Driving + Listening.

### Procedure

1. Training & acquainting with keyboard controls
2. Stimuli (Driving video, TTS audio, or Both)
  - Reaction time tracking for the driving conditions
3. NASA-TLX (Task Load Index Questionnaire)



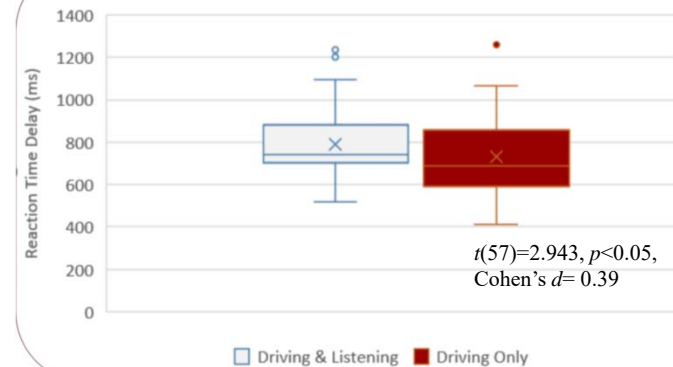
## RESULTS

1. Audio learning caused slower response to warning messages (124 ms), but the slower response might not lead to practical danger in a semi-autonomous driving situation.
2. Audio learning in a semi-autonomous driving situation is significantly more tasking than either driving or audio learning alone.

## REFERENCES

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Warning Response Delay



Task Load Index

