Internship “evaluation of a cognitive enhancement intervention study”

In recent years it has become clear that training cognitive skills can have positive near-transfer effects, for instance on working memory. However, there is still limited evidence regarding the transfer to performance in the 'real' world, for example among operators in the military or aviation sector, and there is a lack of knowledge regarding the possible stress-reducing effect of such ‘cognitive enhancement’ types of training.

Description

The objective of the project is to evaluate a promising cognitive enhancement training by means of a randomized controlled trial. Participants have had a baseline assessment, including a flight simulation task and several standard cognitive performance tasks. During these tasks, their stress level was obtained both objectively (HRV) and subjectively (questionnaire). After the assessment participants were either assigned to the real training intervention, or to an active control training for four weeks. After the four weeks they will be invited for a post-assessment to be able to evaluate the effects of the training and to compare the intervention group with the control group.

Tasks to be foreseen

- Performing the post-assessment tasks with about 30 participants
- Cleaning, structuring, processing of the total dataset (including the baseline assessments)
- Analyse the data with the appropriate statistical techniques (e.g. by means of R or SPSS)
- Report about the outcomes in the form of a scientific paper
- Present the outcomes of the study at NLR

This fulltime internship starts preferably as soon as possible, either 15 November or 1st of December. The duration of this assignment will be about 3 months. We offer an inspiring high-tech aerospace-oriented working environment and an informal culture with room for personal initiative although you might partly have to work remotely because of COVID-19. You will receive a compensation for general expenditures.

Requirements

- A motivated (HBO or WO) student in Psychology or equivalent
- Good communication, organisational and writing skills
- Experience with performing measurements
- Experience with R, SPSS, and Python is a plus

For more information, please contact Maykel van Miltenburg, MSc. (maykel.van.miltenburg@nlr.nl; 088-5113389).

Company

NLR is a leading international research centre for aerospace. Its mission is to make air transport safer, more efficient, more effective and more sustainable. Bolstered by its multidisciplinary expertise and unrivalled research facilities, NLR provides innovative and comprehensive solutions to the complex challenges of the aerospace sector. NLR’s operator performance group has a wide range of both academic and practical knowledge on operator performance and human factors (HF) in complex environments. Operator-in-the-loop studies are performed to measure the manner in which personnel conduct themselves in an operational setting (either simulated or realistic). The assessment includes operator performance aspects such as (crew) workload, (team) situation awareness, usability, visual perception, vigilance, and (eye) fatigue. Data is gathered objectively (e.g. heart rate and eye-tracking) and subjectively (e.g. through interviews, workshops and questionnaires).

Application

Send your application, together with your motivation letter and CV to maykel.van.miltenburg@nlr.nl. A first selection of candidates will be made ASAP. However more internships related to, and in continuation of, the current one are foreseen. Therefore late responses are also appreciated.