Andreas Sellstone

Cognitive Scientist

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Work Experience

Fall 2023, Internship, Umeå University, Department of Language Studies.

- Engaged in a collaborative research project as the lead author of a book chapter titled '*Visualising the Process of Answering Clinical and Diagnostic Linguistic Tests*', currently under review for publication by Brill.
- During the project, I designed visualizations of data from keystroke logging software, which provides a detailed record of user keystrokes. This data can facilitate the diagnosis of reading and writing difficulties. The project aimed to simplify the complex visualization formats previously intended for researchers and make them more user-friendly for educators and healthcare professionals.
- In addition to my role as lead author, I conducted research, performed regression analyses, and designed data visualizations.

Projects

Master's thesis (2nd year): Exploring Cognitive Processes in AI-Assisted Academic L2 Writing

- My master's thesis investigated the use of AI tools for academic writing in English. The aim was to identify usability challenges from a cognitive perspective by examining how these users interact with and evaluate AI-generated suggestions to improve their texts.
- The writing process was analyzed by tracking keystrokes. Quantitative analyses of complexity and readability were conducted on both the original and revised texts to identify differences before and after the use of the AI tool. Qualitative analyses were performed on semi-structured interviews.

Master's thesis (1st year): From Keystrokes to Cognitive Processes: Analyzing Morphological Knowledge Using Keystroke Logging

- In my first year master's thesis I investigated the application of keystroke logging in classroom environments for academic testing. The project involved analyzing keystroke data to reveal insights into students' cognitive strategies during testing.
- I conducted an experiment with 21 high school students, analyzing their interaction with the computer, highlighting the importance of understanding user behaviors and preferences to inform the development of more intuitive and effective educational tools.

Publications

Sellstone, A., Sandström, L., & Sullivan, K. P. H., (n.d., under review). Visualising the Process of Answering Clinical and Diagnostic Linguistic Tests. In Leblay, C., Caporossi, G., & Usoof, H. (Eds.). *An Introduction to Data Visualisation of the Writing Process*. Brill.

Profile

With my master's degree in Cognitive Science completed, I aim to apply my understanding of technology, human cognition, and language. Through my academic work, which includes a bachelor's thesis, a master's thesis, and a book chapter on interaction with keystroke logging software and AI tools, I have developed a strong ability to understand user needs and clarify complex information. This knowledge prepares me to bridge the gap between technology and users by ensuring comprehensible and accessible technological solutions.

Education

Master of Science, Cognitive Science
Umeå University, Umeå
2022 - 2024

Bachelor, Theoretical Philosophy with Linguistics
Stockholm University, Stockholm
2019 - 2022

Relevant courses:

- Cognitive Design
- Interaction Design and Emergent Technologies
- Information Technology: Possibilities and Challenges
- Programming for Linguists
- Introduction to Programming with Python
- Data Collection and Analysis
- Language and Cognition
- Psycholinguistics
- Higher Cognitive Functions

Skills

Technical skills:

- Excel
- Python
- Figma
- Adobe Illustrator
- Adobe Photoshop

Language skills:

- Swedish (native language)
- English (fluent)