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### **Proceedings of the Annual Meeting of the Cognitive Science Society**

#### **Title**

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#### **Permalink**

<https://escholarship.org/uc/item/1hp6v2zc>

#### **Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 44(44)

#### **Authors**

Tehranchi, Farnaz  
E. Ritter, Frank

#### **Publication Date**

2022

Peer reviewed

# Including Errors and Errors Correction in a Cognitive User Model

**Farnaz Tehranchi**

The Pennsylvania State University, University Park, Pennsylvania, United States

**Frank E. Ritter**

Pennsylvanian state university, state college, Pennsylvania, United States

## Abstract

We present a user error model that simulates a user's errors using an eyes and hands extension to cognitive architectures. We developed a complete interactive cognitive model that performs a spreadsheet task. This model is compared with an existing cognitive model that performs the same task in a different spreadsheet tool. Also, the predictions are compared to human data (N=23) on the same uninstrumented interfaces. The comparison suggests that the interactive cognitive model moves us closer to having a user model that can directly test interfaces by predicting human behavior and performing the task on the same interface that users interact. The error model also allows exploration of error detection, error correction, and different knowledge types.