

Human Detection and Diagnosis of System Failures Jens Rasmussen, William B. Rouse 2013 Springer Science & Business Media, 2013 9781461592303 716 pages

System logs record system states and significant events at various critical points to help debug performance issues and failures, and perform root cause analysis. Such log data is universally available in nearly all computer systems and is a valuable resource for understanding system status. This work proposes DeepLog, a data-driven approach for anomaly detection that leverages the large volumes of system logs. The key intuition behind the design of DeepLog is from natural language processing: we view log entries as elements of a sequence that follows certain patterns and grammar rules. Indeed, a system log is produced by a program that follows a rigorous set of logic and control flows, and is very much like a natural language (though more structured and restricted in vocabulary). Nursing Diagnoses and Guide to Planning Care sections to create a unique, individualized plan of care. UNIQUE! Provides care plans for every NANDA-I approved nursing diagnosis Promotes evidence-based interventions and rationales by including recent or classic research that supports the use of each intervention. The Merck Manual of Diagnosis and Therapy now in its 20th edition has been thoroughly updated and thoughtfully expanded with a new larger trim size to include 40% new and revised content. Including 36 new chapters with more than 200 new tables, and numerous new figures. Packed with essential information on diagnosing and treating medical disorders, this comprehensive guide was written by a team of medical experts. The signal detection analysis shows that overall system performance is highly sensitive to the interaction between the human's monitoring strategy and the decision parameter, C_a , of the automated monitor subsystem. Usual design practice is to set C_a to a value that optimizes the automated monitor's detection and false alarm rates. Our analysis shows that this setting will not yield optimal performance for the overall human-machine system. Furthermore, overall system performance may be limited to a narrow range of realizable detection and error rates. Human detection and diagnosis of system failures. Article. Jan 1981.