

Artificially Intelligent Context Aware Personal Computer Assistant (ACPCA)

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Abstract : In this paper a novel concept of a self learning smart personalized computer assistant (ACPCA) is established which is a context aware system. Based on user habits, moods, and other routines/situational reactions the system will manage various services and suggestions at appropriate times including what schedule to follow, what to watch, what software to be used, what should be deleted etc. This system will utilize a hybrid fuzzyNeural model to predict what the user will do next and support his actions. This will be done by establishing fuzzy sets of user activities, choices, preferences etc. and utilizing their combinations to predict his moods and immediate preferences. Various application of context aware systems exist separately e.g. on certain websites for music or multimedia suggestions but a personalized autonomous system that could adapt to user's personality does not exist at present. Due to the novelty and massiveness of this concept, this paper will primarily focus on the problem establishment, product features and its functionality; however a small mini case is also implemented on MATLAB to demonstrate some of the aspects of ACPCA. The mini case involves prediction of user moods, activity, routine and food preference using a hybrid fuzzy-Neural soft computing technique.

Keywords : context aware systems, APCPCA, soft computing techniques, artificial intelligence, fuzzy logic, neural network, mood detection, face detection, activity detection

Conference Title : ICECSE 2015 : International Conference on Electrical, Computer and Systems Engineering

Conference Location : Toronto, Canada

Conference Dates : June 15-16, 2015