IT 704 Elective –I (IT- 712- Human-Computer Interaction)

Unit I: Introduction, Human Computer Interaction (HCI) concepts and definitions, Nature of interaction human and Machine, interaction design, understanding and conceptualizing interaction, understanding users, interfaces and interactions, data gathering.

Unit II: Introduction to User Centered System Design (UCSD), Natural computing, user centered system design, core concepts, interactive design and its strength and weakness, types of user model, user model and evaluation, Heuristic evaluation.

Unit III: Psychological user models. Black box models of human performance, including perception, motor control, memory and problem-solving. Quantitative analysis of performance. Human processor, keystroke level model, and GOMS descriptions of user performance.

Unit IV: Modeling of system understanding. Mental models and metaphor, use of design prototypes, controlled experiments. Cognitive walkthrough. Evaluation from the perspective of a novice learning to use the system.

Unit V: Task analysis and design. Contextual and qualitative studies, use-case driven design. Research techniques. Cognitive dimensions of notations, CSCW, ubiquitous computing, new interaction techniques, programmability.

References:-

- Alan Dix, Janet E. Finlay, “Human-Computer interaction”, Pearson Education.
- Olsen, “Human-Computer Interaction”, Cengage Learning.
- Preece, J. Sharp, H. & Rogers, “Interaction design: beyond human-computer interaction Y. Wiley.
- Smith Atakan Serengal, “Human-Computer Interaction”, Cengage Learning.

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