Usability Engineering
EIN 5993
T 19:05-21:45

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Office Hours: TR 13:00-14:00
348-3537

Course Description: Usability Engineering involves the design of system interfaces to maximize user effectiveness, efficiency and preference. This course will cover techniques and methodologies for developing and evaluating interfaces, specifically applied to computers and computer technologies.

Course Objective: This course will provide graduate and advanced undergraduate students with critical knowledge and experience in designing and evaluating technology interfaces.

Learning Objectives: By the end of this course, students will:
1. be familiar with the user-centered design process
2. be able to design, prototype, and test computer interfaces
3. be able to apply usability engineering to advanced computing technologies

Prerequisites: EIN 4243 Human Factors Engineering

Textbook:
Stone D., Jarrett C., Woodroffe M., and Minocha S. (2005). User Interface Design and Evluation. Morgan Kaufmann: San Francisco, CA.

Introduction to Usability Engineering
1/10 Introduction to Usability Engineering; Managing the User Centered Design process (Ch 1, 29)

Early Design
1/17** Pre-Design: User requirements; Universal design; Task analysis (Ch 2,3,4,6)
1/24 Pre Design Methods: Surveys
2/31[1] Conceptual Design: Information Architecture/Organization (Ch 5, 6.6, 8)
3/7 Conceptual Design Methods: Card Sorting
2/14[2] Conceptual Design: Information Architecture/Navigation (Ch 17)
2/21 Conceptual Design Methods: Low Fidelity Prototyping, Conceptual Walkthrough (Ch 20)

Detailed Design
3/28 Detailed Design: Labeling, Screen Layout, Typography (Ch 11, 13, 14)
3/7[3] Detailed Design Methods: Expert Reviews, Customer Talkthroughe (Ch 9, 26)
3/14 Design Critiques
3/28[4] Detailed Design: Widgets, Dialogs, Messages (Ch 15, 16)
4/4 Detailed Design Methods: User Testing (Ch 21, 22, 23, 24, 25)

Applications
4/11[5] E-commerce: recommendation systems, reputation management (Ch 27)
4/18[6] Search UI, Community

You will be responsible for completing six assignments:
1. Collection of user requirements (Paired Project) (10% of your grade)
2. Card Sort prediction and implementation, with discussion of differences (Paired Project) (10% of your grade)
3. Design and paper-based testing of a **low** fidelity prototype (Team Project) (20% of your grade)
4. Expert Review of an **existing** system (Paired Project) (20% of your grade)
5. User test of an **existing** local or web application (Team Project) (20% of your grade)
6. Research Project (Team Project) (20% of your grade)

Up to 5% of your grade will be evaluated from your class participation. Everyone is expected to read the book and outside readings ahead of time and be prepared to discuss the material in class.