Arul Isai Imran

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Objective

Career in usability and user-centered design of user interfaces, with a focus on human-computer interaction.

Summary

Three years of experience in designing & prototyping user interfaces; performing, planning & conducting heuristic evaluations, task analyses, & usability tests. Creative, innovative problem solver. Demonstrated leadership ability in managing interdisciplinary teams using effective oral & written communication skills. Excellent planning skills. Productive in fast-paced, deadline-driven environments

Education

M.S., Industrial and Systems Engineering, (Human Factors Engineering and Ergonomics)
Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg VA.
Overall GPA – **3.56**

B.S. Electronics and Communication Engineering, May 2002
University of Madras, Chennai, India.

Thesis

User-Centered Requirements Capture & Adoption Study for the Public Safety Cognitive Radio
Co-Advisors: Dr. Tonya Smith-Jackson and Dr. Brian Kleiner

- The goal is to develop an interface, utilizing user-centered design principles and participatory design techniques, taking into account the contexts of use of various first-responders such as the police, firefighters and EMS officers.
- Involves user needs analysis, adoption studies, prototyping techniques and user acceptance testing. Funded by the National Institute of Justice

Work Experience

Graduate Research Assistant (Sep 2005 – Aug 2006)
Center for Wireless Telecommunications (CWT), Virginia Tech, Blacksburg, VA

- Conducted ethnographic studies and interviews of end users to gather requirements
- Iterative design and usability testing of an interface (developed using AJAX)
- Developed usability evaluation tasks and questionnaires for testing

Instructor (Jan – Oct 2006)
Faculty Development Institute (FDI), Virginia Tech, Blacksburg, VA

- Responsible for teaching faculty and freshmen Tablet PC technology and software
- Created learner-centered instruction material, structured around participant needs
- Taught and assisted FDI workshops on Web Development & Design, Digital Tools & Content and Tablet PCs

Graduate Research Assistant, (Sep – Dec 2005)
Department of Computer Science, Virginia Tech, Blacksburg, VA

- Created a LASER exhibit for the Anywhere Museum concept aimed at attracting the viewers' attention while imposing minimal cognitive load

Expert Reviewer, (Nov – Dec 2004)
Assessment and Cognitive Ergonomics (ACE) Lab, Virginia Tech, Blacksburg, VA

- Conducted heuristic analysis and cognitive walkthrough; identified design attributes violating cognitive ergonomics & hand-held usability principles

Webmaster and Designer (Aug 2004 – May 2005)
Center for Geospatial Information Technology, Virginia Tech, Blacksburg

- Redesign of existing department website with a focus on usability, navigability, aesthetics and effective presentation of content
- Involved user needs analysis, closed card sorting and consistency inspections.

Academic Projects

Design of Phoebe's Field (Aug 2005 – May 2006)

- A year long endeavor sponsored by the National Science Foundation
- Part of a team that conceptualized and designed the form and the interface for an interactive handheld device that would act as a guide and companion to the visitors of the museum
- Responsible for conceptualizing and designing an interactive website focused on the target group while maintaining functional and aesthetic consistencies to the overall project

Design of Calvin's Box (Aug 2005 – May 2006)

- A CyberArt project created to observe a user's reaction and behavior towards a constantly changing system in a sociable environment

Design of Faculty-centered Web-based Learning Modules (Jan – May 2005)

- Development of an interactive, user-centered, self-contained web-based training tool to support faculty teaching and advising of international and domestic ethnic minority students
- Involved user requirements analysis, task analysis, accessible design, information architecture design, interaction design, and usability testing

Design of 'pPING', a System to Distribute Real-time Parking Data (Jan – May 2005)

- System aimed at facilitating parking and easing the congestion in parking lots. A prototype providing near real-time parking data directly to the vehicles on the move was implemented and tested
- Used conceptual design techniques such as brainstorming, storyboarding, bodystorming & photomontages, ethnographic studies, content analysis & mapping and interaction design

Design of Multipurpose Gardening Tools for People with Cognitive Disorders (Aug–Dec 2004)

- Electrically operated tools with the ability to be integrated into a wheelchair or a portable stand. Designed to incorporate multiple disabilities and disorders
- Human-Machine interface design involving task and function analysis with particular attention to ecological validity and accessibility

Design of 'SpeedyOrder', secure automated ordering system for food courts (Jan–May 2004)

- System consisting of a kiosk allowing customers to search menus based on price or cuisine and order food, a shop console and an administrative console
- User Interface mockup and design focused on learnability, efficiency and memorability based on ethnographic studies followed by heuristic evaluations and re-design

Skills

Programming and Applications: Adobe Photoshop, 3D Studio Max, Macromedia Dreamweaver, Multimedia authoring and editing tools, Adobe Indesign, Minitab, Office Applications, Microsoft OneNote, MS Visio, HTML, JavaScript, CSS, & AJAX.

Operating Systems: Windows (200x, XP and Vista), Mac OSX and LINUX

Courses

Human Factors: Human Computer Systems, Macroergonomics, Human Information Processing, HF Research Design, HF System Design, Human Physical Capabilities

Human Computer Interaction: Usability Engineering, Computer-Supported Cooperative Work, Multimedia, Hypertext & Information Retrieval

Computer Science: Design of Interactive Systems, Exhibit Design & Realization, CyberArts Engineering & Art Studio

Other: Optimization (Linear Programming), Simulation Modeling and Analysis, Phoebe's Field Exhibit, Internship in Education

Achievements and Activities

- **Co-Inventor on provisional patent** filed for the exhibit components of Phoebe's Field™
- **Tuition Scholarship** from the Dean of Graduate School, Virginia Tech (2006)
- Member, Human Factors and Ergonomics Society, VT Student Chapter (2004 onwards)
- Assistant PR for Council of International Student Organizations at Virginia Tech (2003 – 2004)
- Vice-President of College Student's Council (2001-2002)