Raju Maharjan

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I am a Human-Computer Interaction (HCI) researcher and designer with particular interests in health technology and speech interfaces.

SKILLS

Prototyping
Conversational Agents
Chat-bots
Mobile apps
Web apps
3D Models

Design
Dialogflow
Figma
Axure
Illustrator
Photoshop
Indesign
After Effects
Premiere Pro
Autodesk Maya

Development
Javascript
PHP
HTML
CSS
MySQL/NoSQL
Java

Data Analysis
R
MS Excel
Python (Basic)
Thematic Analysis

Communication
Engaging and effective presentation of concepts, methods, and findings using graphics, prototypes, graphs and charts.

Skilled in bridging the gap between UI designers and back-end developers.

Leadership
Facilitated workshops
Mentored students
Recruited team members
Trained new team members

EXPERIENCE

Ph.D. Student, Technical University of Denmark, DK   02/18-12/21(Expected)

Undertook two research projects during my Ph.D. The first involved design and evaluation of a smart speaker-based conversational agent named *Sofia*'s feasibility in supporting the self-report of mental health and wellbeing. The second project concerned the user-centered design of an ambulatory heart monitoring system called *mCardia*.

Sofia

- Analyzed critical user reviews of Amazon Alexa's health and fitness Skills using Structural Topic Modeling (STM) to derive users' needs from the critiques to inform the future designs of the system for more effective and engaging user experiences in the context of health and wellbeing.
- Developed a questionnaire-driven conversational agent with state-based and free-form conversational designs and evaluated the accuracy of the designs in capturing mental health self-reports and users' experiences in a lab setting.
- Developed and deployed a conversational agent via Google Home device that enabled daily open-ended self-reports of wellbeing as well as fortnightly responses to a health questionnaire, then conducted a 4-week mixed-method field deployment study involving 20 people living with depression or bipolar disorder to understand their experiences and perceptions of the system.

mCardia

- Developed a Requirement Analysis Document (RAD) through a series of interviews, co-design workshops with both patients and clinicians and field visits to the cardiology department in a large Danish hospital.
- Considering different and often conflicting requirements from the stakeholders, designed prototypes of patient mobile app and web app for the clinicians through an iterative design process.
- Designed a visualization of cardiovascular data such as Heart Rate (HR), HR Variability, and MET level collected via a Holter device and contextual information, including sleep and step counts, to enable real-time reflection of the data on the mobile app.

Frontend Developer, Google, CA   09/17-01/18

Worked on several high-traffic websites to improve their performance on mobile devices.
- Analyzed mobile web pages and prioritized action items to increase the speed of the client's site for a better user experience on mobile devices.
- Developed Accelerated Mobile Pages (AMP) for client webpages and ensured that the page loads within 3 seconds in a 3G network.
- Supported clients' web development teams for AMP integration
- Developed a script that automated email communication with the clients, which facilitated efficiency and avoided human errors.

EDUCATION

Ph.D.
12/21 (Expected)
HCI & Health Technology
Technical University of
Denmark

MA
01/17
Web & Multimedia Design
Touro College

BS
06/13
Dynamic Web Design
The City University of New York

AAS
New Media Technology
The City University of New York
08-2009

AWARDS

Promise Prize
Code for Change 2012
NYU Wagner

Thomas W. Smith Fellowship
2012, 2013
The City University of New York

UI/UX Engineer, Abbott Point of Care, NJ   03/15-08/17

Contributed to all the stages of SDLC to create a cloud based clinical instrument management system i-STAT Alinity.
- Developed meaningful user interfaces following user-centered design process by creating user flows, wireframes, mockups and prototypes.
- Established a design language and developed high-impact, user-centered interfaces with strong emotional appeal and intuitive navigation to maximize user engagement utilizing asynchronous JavaScript, HTML5, CSS3 and C#.

Frontend Developer, Harland Clarke, TX   08/13-07/14

Worked on multiple projects concurrently with a dynamic team of designers and developers to create web pages of some of the high traffic eCommerce websites.
- Implemented engaging user interactions into the web applications using HTML5, CSS3 and jQuery to achieve client's business objectives, brand and marketing strategies.

Frontend Developer, NYC HR Administration, NY   04/12-05/12

Designed and developed the presentation layer of a high traffic web portal that allowed access and allocation of resources to AIDS patients in all five boroughs of New York City.
- Responsible for overall branding and optimization of existing web pages by implementing CSS3 and HTML5.

Director of Technology, Artbox - City Tech, NY   04/11-01/12

- Researched latest technologies in web and mobile application to create online community of artists and art enthusiasts for a NSF funded app development project.
- Conducted interviews, visited museums, auction houses and art exhibitions to understand the trends and technologies to design a concept mobile app that is local, social and mobile.

Web Developer, Iced Media/Boom Digital Ventures, NY   11/09-10/10

- Worked with a cross-functional team from around the world to create a cutting-edge user experience for the Maybelline New York website using HTML5, CSS3, and jQuery.
- Developed pixel-perfect web pages from PSDs to create Facebook sweepstakes for clients such as KMart, Avalon Organics, Maranatha, Alba Botanica, Jason Personal Care, etc.
- Created newsletters using HTML, inline CSS, and media queries for handheld device support.
- Built custom WordPress themes with user-friendly interfaces both in admin and frontend.

Technology Mentor, CUNY Research Foundation, NY   07/07-05/08

- Helped the faculty to design, develop, utilize, and maintain technology-enriched teaching resources such as PowerPoint presentations, web pages, blackboard courses, interactive multimedia, ePortfolio development, library database and internet searches.
- Designed interactive tutorials in Flash for students and the faculty to help them use various tools for research, web development, and document production.