Raju Maharjan, Ph.D.

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2023–Current **Assistant Professor**
School of Visual Arts, University of Oklahoma, Norman, OK

APPOINTMENTS

2022–2023 **Postdoctoral Fellow**, Penn State University

2021–2022 **Postdoctoral Researcher**, Technical University of Denmark (DTU)

EDUCATION

2021 **PhD**, Department of Health Technology, DTU

2017 **MA**, Web and Multimedia Design, Touro GST

2013 **BS**, Dynamic Web Design, Graduate Center, City University of New York (CUNY)

2009 **AAS**, New Media Technology, LaGuardia Community College, CUNY

PUBLICATIONS

JOURNAL ARTICLES

2024 **Raju Maharjan**, Kevin Doherty, Saeed Abdullah, and Jakob Bardram. Long-term Use of Smart Speakers by People Living with Mental Health Conditions.
In Preparation

Milton Mariani, **Raju Maharjan**, Sanjana Mendu, Saeed Abdullah, and John Paulin Hansen. Exploring the Impact of Real-Time Verbal Feedback from a Exoskeleton-Based Virtual Exercise Coach on User Engagement during Physical Exercise Performance.
In Preparation

2022 **Raju Maharjan**, Kevin Doherty, Darius Adam Rohani, Per Bækgaard, and Jakob E. Bardram. 2022. Experiences of a Speech-Enabled Conversational Agent for the Self-Report of Wellbeing Among People Living with Affective Disorders: An In-The-Wild Study. *ACM Trans. Interact. Intell. Syst.*
DOI:10.1145/3484508

Raju Maharjan, Darius Adam Rohani, Kevin Doherty, Per Bækgaard, and Jakob E. Bardram. 2022. What is the Difference? Investigating the Self-Report of Wellbeing via Conversational Agent and Web App. *IEEE Pervasive Computing, Special Issue on Mental Health, Mood, and Emotion.*
DOI:10.1109/MPRV.2022.3147374

Raju Maharjan, Darius Adam Rohani, Kevin Doherty, Per Bækgaard, and Jakob E. Bardram. 2022. What's up with these Conversational Health Agents? From Users' Critiques to Implications for Design. *Frontiers in Digital Health.*
DOI:10.3389/fdgth.2022.840232

Devender Kumar, **Raju Maharjan**, Alban Maxhuni, Helena Dominguez, Anne Frølich, and Jakob E. Bardram. 2022. MCardia: A Context-Aware ECG Collection System for Ambulatory Arrhythmia Screening. *ACM Trans. Comput.* Healthcare 3, 2, Article 20 (April 2022), 28 pages.
DOI:10.1145/3494581

Conference Papers

2021 **Raju Maharjan**, Darius Adam Rohani, Per Bækgaard, Jakob Bardram, and Kevin Doherty. 2021. Can we talk? Design Implications for the Questionnaire-Driven Self-Report of Health and Wellbeing via Conversational Agent. *CUI 2021 - 3rd Conference on Conversational User Interfaces.* Association for Computing Machinery, New York, NY, USA, Article 5, 1–11.
DOI:10.1145/3469595.3469600

2020 Giovanna Nunes Vilaza, **Raju Maharjan**, David Coyle, and Jakob Bardram. 2020. Futures for Health Research Data Platforms From the Participants' Perspectives. In Proceedings of the 11th NordiCHI '20. Association for Computing Machinery, New York, NY, USA, Article 39, 1–14.
DOI:10.1145/3419249.3420110

Workshop Papers and Abstracts

2019 **Raju Maharjan**, Per Bækgaard, and Jakob E. Bardram. 2019. "Hear me out": smart speaker based conversational agent to monitor symptoms in mental health. In *Adjunct Proceedings of the 2019 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2019 ACM International Symposium on Wearable Computers* (*UbiComp/ISWC '19 Adjunct*). Association for Computing Machinery, New York, NY, USA, 929–933.
DOI:10.1145/3341162.3346270

2018 **Raju Maharjan**, Per Bækgaard, and Jakob E. Bardram. 2018. Leveraging Multimodal User-labeled Data for Improved Accuracy in Interpretation of ECG Recordings. In *Proceedings of the 2018 ACM International Joint Conference and 2018 Inter-*

national Symposium on Pervasive and Ubiquitous Computing and Wearable Computers (UbiComp '18). Association for Computing Machinery, New York, NY, USA, 636–641.
DOI:10.1145/3267305.3267548

<small>POSTERS AND DEMOS</small>

2018 Pegah Hafiz, **Raju Maharjan**, and Devender Kumar. 2018. Usability of a mood assessment smartphone prototype based on humor appreciation. In *Proceedings of the 20th International Conference on Human-Computer Interaction with Mobile Devices and Services Adjunct (MobileHCI '18)*. Association for Computing Machinery, New York, NY, USA, 151–157.
DOI:10.1145/3236112.3236134

TEACHING

2024–Current **DES 3633: Visual Communication Design III**
School of Visual Arts, University of Oklahoma
Developed Syllabus and teaching material on the topic: UX Design and Prototyping

2023–Current **DES 3643: Integrated Tech**
School of Visual Arts, University of Oklahoma
Developed Syllabus and teaching material on the topic: UI/UX Design for Ubiquitous Systems

Fall 2022 **HCDD 340: Human-Centered Design for Mobile Computing**
College of Information Sciences and Technology, Penn State University
Developed teaching material and delivered a guest lecture on the topic: Voice User Interface Design and

Spring 2019 **MSc Capstone Project**
DTU Compute, Department of Applied Mathematics and Computer Science
Supervised on the research, design and development of a Microbit-based medicine container to track medicine intake for improved medication adherence.

Spring 2019 **Personal Data Interaction for Mobile and Wearables**
DTU Compute, Department of Applied Mathematics and Computer Science
Delivered a guest lecture on data visualization. Assisted students with coursework and graded assignments

Summer 2019 **User Experience Engineering**
DTU Compute, Department of Applied Mathematics and Computer Science
Assisted students with coursework and graded assignments

Fall 2018   **User Experience Design and Prototyping**
DTU Compute, Department of Applied Mathematics and Computer Science
Assisted students with coursework and graded assignments

Service

2023–Current   **Faculty Advisor** UI/UX club, University of Oklahoma
2022   **Research Topic Coordinator**
Frontiers in Computer Science
Topic: Voice Interaction in Healthcare:Existing Challenges, Opportunities and Directions for Future Work

2019   **Student Volunteer**
ACM International Joint Conference on Pervasive and Ubiquitous Computing

Paper Review

2019–Current   ACM Conference on Human Factors in Computing Systems (CHI)

2024   ACM Conference on Intelligent User Interfaces (IUI)

2023   ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)

2023   Journal of Medical Internet Research (JMIR)

2023   Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)

2021   ACM International Symposium on Wearable Computers (ISWC)

2020   EAI International Conference on Pervasive Computing Technologies for Healthcare (Pervasive Health)

Awards

2023   **Initiative for the Humanities and Arts in Society Seed (IHAS) Grant**
University of Oklahoma, OK
Topic: Developing a Generative AI Pedagogical Framework for Visual Communication Design Education

2022   **President's Posdoctoral Fellowship**
Penn State University, PA

2012 – 2013   **Thomas W. Smith Fellowship**
City University of New York, NY

2012   **Promise Prize, Code for Change**
New York University, NY

Presentations and Talks

2022   **15th Annual Postdoctoral Research Symposium**
Penn State University
Topic: Research at the Intersection of Design, Technology and Mental Health and Best Wellness Apps to Reduce Stress

2022   **Design Talks**
University of Technology Sydney, Australia
Topic: Leveraging Voice Interfaces to Support Health and Wellbeing

2022   **Voice Interface to Support Mental Health and Wellbeing**
University of Copenhagen, Denmark

Professional Experience

2017–2018   **Frontend Developer**, Google, CA

2015–2017   **UI/UX Engineer**, Abbott Point of Care, NJ

2013–2014   **Frontend Developer**, Harland Clarke, TX

2012   **Frontend Developer**, HIV/AIDS Services, NYC Human Resource Administration

2011–2012   **Web Designer and Developer**, NYC College of Technology, NY

2009–2010   **Web Developer**, IBREA Foundation, NY

2009–2010   **Web Developer**, Iced Media and Boom Digital Ventures, NY