MARCOS BAEZ

HCI & UX Researcher | Prototyping & Product Development

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SUMMARY

Human-Computer Interaction (HCI) and UX researcher with over 10 years of experience specializing in user insights, ideation, and prototyping for health and social technologies. Skilled in seamlessly combining engineering and design expertise to quickly transform user insights into functional, human-centered prototypes that empower diverse user groups, including individuals with disabilities.
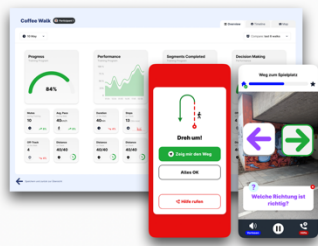
KEY SKILLS

- **User-Centered Research and Insights.** Proficient in designing and conducting user research, usability testing, and A/B testing to uncover actionable insights. Skilled in leveraging research findings to understand user needs, behaviors, and pain points.

- **Data-Driven Design and Conceptualization**. Experienced in designing user studies and applying qualitative and quantitative research methods to inform data-driven design. Able to translate insights into design concepts, including personas, storyboards, and user scenarios, and identify product opportunities.

- **Prototyping & Development**. Experienced in rapid prototyping and end-to-end product development. Skilled in designing full-stack systems and service-oriented archictures, with web and mobile clients. Able to leverage relevant programming languages and frameworks as required (Node, C#, Java, Python, PHP, etc).

- **AI & Accessibility Innovation**. Experienced in conceptualising AI-driven tools and applications in the social and health sector, e.g., developing Conversational AI solutions to facilitate natural language interactions and accessibility solutions.

- **Collaboration & Leadership**. Led cross-disciplinary teams in delivering user-centric solutions for research and industry projects. Skilled in Agile project management, especially within international and multidisciplinary teams.

- **Knowledge Transfer & Dissemination**. Experienced in mentoring and onboarding colleagues and students, effectively transferring knowledge and disseminating research findings through reports, presentations, and visualizations.

PROFESSIONAL EXPERIENCE
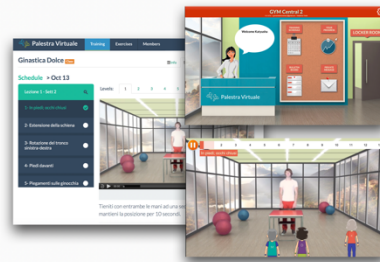
Senior Research Associate
Hochschule Bielefeld, Campus Minden, Germany (2022–Jan 2025)
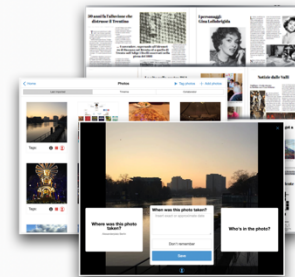
SELECTED PROJECTS

PAGAnInI

Route training system and apps enabling for people with cognitive impairments

Gymcentral

A virtual social gym for older adults to follow group training exercises from home, assisted by a Coach

Collegamenti

Tools to facilitate and encourage social interactions and friendships among older adults (and family) in nursing homes

- Guided the design and development of the **PAGAnInI** project, developing a personalized route-learning system to support individuals with cognitive impairments in achieving independent mobility.

- Conceptualised and developed a mobile application enabling tailored training programs, ensuring accessibility through adaptive and contextual user interfaces.

- Created tools for social workers to tailor training plans through a research-driven personalization framework.

- Led cross-disciplinary collaboration between researchers, social workers, and technical teams to deliver project milestones.

- Applied qualitative research methods to evaluate usability, contributing to publications in HCI and accessibility.

Senior Research Associate

LIRIS - Université Claude Bernard Lyon 1, France (2020–Dec 2021)

- Pioneered the "Conversatoinal Web" paradigm, applying Conversational AI for accessibility, creating tools that enable natural language interaction with websites.

- Developed a paraphrase generation pipeline, integrating crowdsourcing and machine learning to improve AI training data.

- Addressed methodological issues in crowdsourcing tasks (data collection), proposing strategies to minimize bias and enhance quality.

- Led and managed research and development activities with a cross-functional team, including students and international collaborators.

Postdoctoral Researcher

University of Trento, Italy (2014–Dec 2019)

- Co-led the **DREAM** project, exploring ICT solutions to enhance learning and social interaction for older adults.

- Led design research for the **Collegamenti** project, an industry project with the Italian leader in ICT solutions for nursing homes (CBA, now Zucchetti), to create ICT services aimed at improving the quality of life for older adults in residential care.

- Led the **Gymcentral** project, designing and evaluating an online exercise platform for older adults to participate in virtual group exercises.

- Conducted user studies and applied human-centered design principles to identify promising solutions, and ensure usability and accessibility for older adults.

- Co-advised PhD and Master's students, and helped secure EU funding for the DREAM project.

- Managed multidisciplinary teams, led the research and evaluation efforts, and contributed to system design and development.

Posdoctoral Researcher

Trento RISE, Trento, Italy (2013–Dec 2013)

- Co-led the **PerTe** project, exploring mechanisms for allowing older adults to participate in remote museum visits through user-centered design and accessibility-focused prototyping.

- Contributed to the **Come Along** project, developing algorithms and applications to motivate user participation in cultural events.

- Applied human-centered design principles, conducting user studies, surveys, and usability evaluations, including frail subjects, to inform design decisions.

Visiting Researcher

Palo Alto Research Center, Palo Alto, CA (2011, 5 months)

- Conducted research on addressing information overload in large-scale idea management systems.

- Developed models and services integrating UX design with machine learning to support facilitators and moderators in these systems.

- Delivered a working prototype for the Innovation Cockpit project within five months.

HIGHLIGHTS

- Led the PAGAnInI project through complex challenges to successful delivery, aligning team efforts across disciplines and ensuring focus on key goals.

- Conducted pioneering research on conversational web interfaces and accessible design, resulting in actionable guidelines for developing more inclusive interactive experiences.

- Conducted critical research on reporting in crowdsourcing experiments, creating a checklist that enhances research rigor (CSCW Methods Recognition Award, 2021).

- Led the development of Gymcentral, from initial user research through multiple trials to its launch as a service via a spin-off (now discontinued).

- Contributed to securing EU funding for the DREAM project, focused on enhancing well-being for older adults through technology.

EDUCATION

PhD in Information and Communication Technologies
ICT International Doctoral School, University of Trento, Italy (2012)
- Dissertation: Knowledge Dissemination in the Web Era. Concepts, Models, and Infrastructure. Supervisor: Prof. Fabio Casati.

Informatics Engineer
Universidad Nacional de Asunción, Paraguay (2006)
- Dissertation: Multilevel Adaptive Team Algorithm. First Class Honor, Cum Laude

AWARDS

- Best reviewer award ICSOC 2023
- Best reviewer award ICWE 2023
- Best paper award at CAiSE 2022
- Methods Recognition award at CSCW 2021
- Outstanding poster award at CSCW 2020
- Honorable mention, Workshop on AI-enabled Process Automation at ICSOC 2020
- Best paper award at Social Computing and its Applications (SCA 2013).
- First Class Honor, Cum Laude. Informatics Engineering Class 2006.

LANGUAGES

Language	Proficiency
Spanish	Native fluency
English	Professional working proficiency
Italian	Professional working proficiency
German	Basic proficiency (A2 level)

RESEARCH AREAS

- **Conversational AI**: Designing and evaluating chatbot interactions for diverse applications, including healthcare and accessible web browsing.

- **Technology for Healthy Aging and Social Inclusion**: Developing and assessing technology-based interventions to improve the well-being of older adults, addressing social isolation, physical activity, and cognitive stimulation.

- **Accessible and Inclusive Design**: Conducting user research and developing design guidelines for accessible and inclusive technology, with a focus on older adults and users with disabilities.

- **Human Computation & Technical Development**: Expertise in leveraging crowdsourcing for data collection and evaluation, and experience in the technical development of interactive systems and web applications.

More about my research at my Google Scholar profile.