

MICHAEL BARAN

EDUCATION

Ph.D. Media Arts and Sciences | DEC 2014

ARIZONA STATE UNIVERSITY | TEMPE, AZ

ADVISED BY DR. THANASSIS RIKAKIS

DISSERTATION

Comprehensive Interactive Neurorehabilitation System Design and Implementation through the Application of Interdisciplinary Research and Integrated Design Approaches

M.S. Bioengineering | MAY 2010

ARIZONA STATE UNIVERSITY | TEMPE, AZ

THESIS

Portable Torso Tracking System: A Preliminary Study

B.S. Biomedical Engineering | MAY 2007

MARQUETTE UNIVERSITY | MILWAUKEE, WI

AWARDS & HONORS

NATIONAL SCIENCE FOUNDATION IGERT FELLOW 2009-2013

JUDGE'S CHOICE IGERT VIDEO & POSTER COMPETITION 2012

ARCS BURTON SCHOLAR 2009-2010

STUDENT FELLOW SCIENCE FOUNDATION OF ARIZONA 2007-2009

HIGHLY SKILLED IN

Public Speaking + Presentation
Interactive Development
Experience Design
Iterative Design
UX Research
Objective-C
Processing

Java
Swift
MATLAB
MaxMSP
Arduino
Data Analysis
Project Management

EXPERIENCED IN

PUBLICATIONS & PRESENTATIONS

Interdisciplinary Concepts for Design and Implementation of Mixed Reality Interactive Neurorehabilitation Systems for Stroke

JOURNAL OF PHYSICAL THERAPY | MARCH 2015
WITH NICOLE LEHRER AND MARGARET DUFF

Design of a Home-Based Adaptive Mixed Reality Rehabilitation System for Stroke Survivors

33RD ANNUAL IEEE EMBS, BOSTON, MA | AUG 30-SEP 3, 2011
WITH NICOLE LEHRER

Adaptive Mixed Reality Stroke Rehabilitation for Clinical and Home-Based Application

PRESENTATION AT AMERICAN PHYSICAL THERAPY ASSOCIATION
COMBINED SECTIONS MEETING 2011 | WITH NICOLE LEHRER

PROFILE

I am an interactive experience designer with expertise in research, development, and project management of integrated technological solutions to complex problems through interdisciplinary approaches. I strive to contribute to collaborative design teams and continually learn new skills.

EXPERIENCE

User Experience Researcher

SEP 2015-PRESENT

FREELANCE FOR OMEDIA INTERACTIVE, EMPIRICAL, AND THUG DESIGN | PORTLAND, OR

- ▶ Manage and facilitate user studies/focus groups for leading technology companies, including Fortune 500, to evaluate novel systems.
- ▶ Oversee user research projects across participant recruitment, study design and implementation, and data collection/analysis.
- ▶ Collaborate with clients to design and implement effective qualitative/quantitative user study components, such as surveys, interviews and usability testing sessions for both short term and longitudinal studies.
- ▶ Lead data analysis and heuristic reviews to deliver user experience design recommendations.

System Design Consultant

JAN 2015-SEP 2015

CARNEGIE MELLON UNIVERSITY DESIGN, ARTS AND TECHNOLOGY | PITTSBURGH, PA

- ▶ Advised code development and physical therapy assessment design for a new mixed reality stroke rehabilitation system.

Lead Researcher

AUG 2009-DEC 2014

ARIZONA STATE UNIVERSITY SCHOOL OF ARTS, MEDIA, AND ENGINEERING | TEMPE, AZ

- ▶ Led an interdisciplinary team (Computer Science, Digital Arts, Electrical Engineering, Fabrication, Rehabilitation Science and Physical Therapy) to develop a mixed reality rehabilitation system for stroke survivors that demonstrated significant improvement in patient functional ability.
- ▶ Translated research spanning user interviews, literature reviews, and test sessions into comprehensive interactive system design guidelines.
- ▶ Designed and implemented the core software architecture to extend and integrate multiple software and hardware components.
- ▶ Developed sensing, analysis, and control modules in Objective-C.
- ▶ Designed two five-week patient training protocols for interactive learning in a minimally supervised environment.
- ▶ Managed multiple parallel cycles of iterative design throughout system development timeline to meet client deadlines.
- ▶ Delivered two complete systems to Emory University and Rehabilitation Institute of Chicago and conducted a pilot study with stroke patients.
- ▶ Analyzed study data and synthesized insights and recommendations in both presentations and academic publications.

Teaching Assistant

AUG 2013-MAY 2014

ARIZONA STATE UNIVERSITY DIGITAL CULTURE PROGRAM | TEMPE, AZ

- ▶ Assisted with introductory programming courses in Processing (Java).
- ▶ Worked individually with students gaining programming experience through class project work.