

Ping Du

I am a **User Research Specialist** with academic trainings, hands-on practices, and industrial experience. I can perform both quantitative and qualitative user research. My research experience involves Product Design, Statistics, Psychology, and Human-Computer Interaction (HCI).

 dping@stanford.edu  515-509-0229  pdu.public.iastate.edu  Mountain View, CA

EXPERTISE (with years of experience)

- **User research** (5): research topic identification, design of user study, survey design, user testing, interview, recruiting and screening participants, heuristic evaluation, and reporting
- **Data analysis** (5): using **R** to analyze quantitative survey and user behavioral data with millions of observations; qualitative data analysis; data visualization
- **Statistics** (5): designing, conducting, and analyzing experiments with human subjects (within-subjects design, between-subjects design, factorial design, and etc.); A/B testing; statistical testing
- **Technology assisted user research: eye tracking** (5+); facial expressions (1/2)
- **Product design** (2+)

SKILLS

Surveys (Cards, Qualtrics)
Statistics (R, JMP)
Design (Photoshop, Solidworks, Adobe Illustrator, AutoCAD)
Eye tracking & biometric measuring (iMotions, Tobii Studio)
Web development (Dreamweaver, HTML)
Prototyping
Storyboarding
Data mining
Programming (Matlab, C)

EDUCATION

Visiting Student Researcher | Stanford University (SU) 10/2015-present

Ph.D. in Mechanical Engineering | Iowa State University (ISU) 08/2010-present

GPA: 3.93 out of 4.00; Minor in Statistics; Graduating in May 2016

B.E. in Mechanical Engineering | University of Science and Technology of China (USTC) 07/2010

EXPERIENCES

Product Research & Development Internship | iMotions Inc., Boston MA 06/2014 – 12/2014

User Research:

- Designed a user study and suggested survey questions to a Fortune 100 company to test its new leading product (*A presentation of the study design to a leader of the client's R&D department*)
- Identified problematic modules of airline websites by innovatively analyzing a combination of facial expression and eye-tracking data (*An external report*)
- Helped with identifying confusion and frustration parts of a new food-making machine for a Fortune 200 company (*Slides for the client*)
- Helped with examining user experiences with a new software application for a Fortune 100 company

Facial Expression Data Analysis: Creatively analyzed and visualized facial expression data using R to identify and show people's attitudes and emotions towards images, videos, advertisements, websites, and physical products (*An internal report, slides of investigation results, and a presentation to an expert*)

Collaboration and Communication: Worked with a product director and software engineers to ensure product quality

Graduate Researcher | Interdisciplinary Research in Sustainable Design Lab, ISU & SU 08/2010 - present

User-Centered Product Design Research (with deliverables):

Conducted three user studies using surveys and eye tracking to understand how consumers evaluate products and make judgments so as to provide suggestions on product improvement to designers (*2 journal papers, a book chapter, 2 conference papers, a manuscript under review, and a conference presentation*)

Study 1: Discovered that (1) how long and how frequently consumers looked at a product feature can predict feature importance in preference decisions, and (2) visual attention consumers spent on

EXPERIENCES - Continued

comparing two sizes of a feature can predict if they noticed the size differences

Study 2: Translated a decision-making model by Houston and Sherman from the realm of psychology to the realm of product design and found it did not hold there. Identified that shared visual features were not ignored by consumers; instead, they can reinforce impressions and affect satisfactions

Study 3: Successfully made consumers associate a product's body shape cues with the product's environmental friendliness within a short time frame to affect consumer judgments

- Designed and prepared product visuals using Photoshop and Solidworks
- Interviewed people in pilot studies
- Recruited a total of 180+ participants and managed the participants
- Processed and analyzed both survey data and eye-tracking data for summarized statistics, hypothesis testing, A/B testing, modeling, and visualization

Design Innovation: Conducted a literature review on idea generation, communication, and selection for further investment to evaluate tools and advice suggested by Innovation Engineering (a training program) *(A journal paper)*

Web Development: Updated and maintained lab website using Dreamweaver and HTML

Summer Research Assistant | User Experience (UX) Lab, ISU 06/2012-08/2012

- Prepared instructional materials on using eye tracking for UX studies for an HCI course
- Helped with setting up a user test of a Volcano Visualization application

TEACHING

Teaching Assistant of Course "Introduction to Mechanical Engineering Design" | ISU 08/2012-05/2015

Product Design: Assisted teaching 270+ students design products through steps including user needs and requirements identification, persona generation, competitive analysis, concept generation and selection, failure analysis, mathematical modeling, prototyping, and testing

PUBLICATIONS

1. **Du, P.** and MacDonald, E., 2015, "Products' Shared Visual Features Do Not Cancel in Consumer Decisions", *Journal of Mechanical Design*, 137(7), 071408.
2. **Du, P.** and MacDonald, E., 2015, "Eye-tracking Aids in Understanding Consumer Product Evaluations", in *The Psychology of Design: Creating Consumer Desire*, R. Batra, D. Brei, and C. Seifert eds., M.E. Sharpe, Inc.
3. **Du, P.**, Miller, C., MacDonald, E., and Gormley, P., 2015, "Review of Supporting and Refuting Evidence for Innovation Engineering Practices," *Design Science*, 1, e5.
4. **Du, P.** and MacDonald, E., 2014, "Eye-Tracking Data Predict Importance of Product Features and Saliency of Size Change," *Journal of Mechanical Design*, 136(8), 081005.

HONORS & AWARDS

Teaching Excellence Award, 1 of 3 recipients for 2 years of superior teaching assistance | ISU 2014

Miller Graduate Fellowship | ISU 2010-2013

Third-place Winner, Mechanical Engineering Graduate Research Poster Competition | ISU 2014

Excellent Undergraduate Research Project | USTC 2009

Outstanding Student Leader | USTC 2008

SERVICE & ACTIVITIES

Judge | State Science and Technology Fair of Iowa 2012

Team member | Chinese Students & Scholars Association (CSSA) of ISU 2011-2012

Volunteer | Annual Iowa FIRST LEGO League (FLL) Championship 2011