David DW Liu, PhD

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9 years user research experience (4 years industry in home/consumer technology and 5 years academic)

Research Work Experience

User Experience Researcher | Google via Artech Information Systems

December 2020 to Current

Conducted generative and evaluative user-centered research on 1) B2C smart cameras/doorbells hardware products with subscription services and 2) B2B smart home enterprise developer portals

- Conducted 16 generative and evaluative UX studies that garnered over 320 unique total views from product managers, UX designers, and engineers which identified and prioritized product improvement on the roadmap
- Increased clarity of product installation copy by 8% by conducting iterative unmoderated usability and foundational studies on privacy, security, and transparency in collaboration with UX writers and designers
- Lifted NPS by 25 points by independently conducting remote UX studies focusing on top user pain points, such as latency, and providing acceptable users' acceptance of latency KPIs to engineers
- Boosted user satisfaction by 9% by identifying user pain points and providing recommendations on product hardware and software installation through a longitudinal study with a diary component, survey, and interviews
- Primary skills used (95% qualitative): moderated/unmoderated usability study, diary study, journey mapping, descriptive statistics, survey design, A/B testing, and experiments

User Experience Researcher | AT&T

June 2019 to December 2020

Conducted mixed methods that is guided by quantitative user-centered research studies on B2C television products with a focus on product measurement, evaluation, and optimization of the user experience

- Identified top 10 areas of prioritization and impacts on product satisfaction by administering over 37 monthly surveys on metrics (e.g., satisfaction, churn, and NPS) and conducted inferential statistics/regression modeling
- Increased satisfaction by 11% by conducting usability tests on top pain points, such as clarity of error messaging, and measuring satisfaction scores before and after the launch of improved messaging
- Reduced churn by 5% by identifying 6 areas of the user experience that have high impacts on churn but low satisfaction on the product road map with data scientists, product managers, designers, and engineers
- Launched two new mixed methods research programs using contextual inquiry, diary studies, interviews, and surveys by identifying strategic open questions from the regression modeling/inferential statistics
- Primary skills used (80% quantitative): moderated/unmoderated usability study, diary study, contextual inquiry, journey mapping, descriptive/inferential statistics, survey design, experiments, A/B testing, R, and Stata

Researcher and Data Analyst | University of California, Irvine – School of Education

September 2014 to June 2019

Conducted user research studies on B2C educational toys/ mobile apps and afterschool program evaluation

- Increased user engagement by 8% on educational apps by identifying 3 discoverability issues on the information architecture of the app through usability testing
- Improved the clarity of educational toy instructions by 12% for bilingual Spanish speaking users by making recommendations on formal vs. informal science terms in Spanish through conducting A/B testing on iterations
- Wrote and presented technical documents and research findings from field visits, contextual inquiry, and diary studies of learning in after school programs to state and government agencies
- Provided leadership and management to a team of 32 researchers by setting weekly goals, modeling research protocols for data collection, collaboratively editing testing scripts, and providing feedback on presentations
- Primary skills used (80% qualitative): usability study, diary study, contextual inquiry, participatory design, journey mapping, card sorting, descriptive/inferential statistics, survey design, A/B testing, SPSS, and Stata

Graduate Teaching Assistant | University of California, Irvine – School of Education
September 2014 to June 2019
Supported 13 undergraduate and graduate courses and taught sections for 9 undergraduate courses including Research
Design as well as Measurement & Assessment
- Designed and analyzed surveys to track students' delighters, pain points, and opportunities for growth
- Analyzed grading data for learning trends

Museum Experience Researcher | Providence Children's Museum
September 2013 to August 2014
Conducted evaluative research on museum signs, analyzed satisfaction surveys, and interviewed visitors
- Increased user time and engagement in the exhibit by 22% by identifying 3 pain points in sign placement and copy and then improving comprehension of museum signs by A/B testing different copy and sign locations
- Increased user satisfaction by 4% by identifying 5 pain points of the museum' experience, such as discoverability of museum opening times and event dates, by conducting interviews and usability testing on marketing materials
- Implemented a new data tracking and research program collecting surveys data on users' satisfaction, user pain points/delighters, and likelihood to return and recommend the museum to others
- Primary skills used (75% qualitative): moderated and unmoderated usability studies, contextual inquiry, journey mapping, descriptive statistics, survey design, and A/B testing

Research Internships

Child Development and Learning Intern | Mattel Inc.
June 2018 – September 2018
Designed A/B tests and usability tests on B2C toys (e.g., Hot Wheels and Barbie) and created journey maps of online toy shopping
- Increased user engagement, such as time spent playing with toys, by 15% through identifying comprehension and pain point issues by A/B and field testing toy facilitation guides in preschools
- Produced a journey map of the online toy shopping experience by conducted analysis of 5 competitors' websites understand competitor pain points such as discoverability issues of filtering toys by age group and by interest
- Designed A/B studies on packaging for copy understanding and iconography comprehension
- Partnered with 20 MBA interns in developing business ideas through design sprints grounded in UX insights
- Primary skills used (100% qualitative): unmoderated usability studies, journey mapping, and A/B testing

Museum Experience Researcher Intern | Discovery Cube Museum
May 2013 - August 2016
Conducted usability studies on museum exhibits/programs and interviewed visitors on museum experience
- Conducted formative and summative assessments through user interviews and surveys from programs quarter to quarter and year to year to compare user engagement and satisfaction of museum programs and exhibits
- Increased users' engagement time by 18% by identifying 4 pain points with museum program materials that caused a disjointed user experience through unmoderated usability studies across 6 different school sites
- Boosted user participation rates by 9% by providing user centered recommendation for marketing, design, and leadership that focus on improving the take home low flow shower heads for the water conservation program
- Primary skills used (60% quantitative): moderated and unmoderated usability studies, contextual inquiry, descriptive/inferential statistics, survey design, experiments, A/B testing, and Stata

Education

PhD in Education, University of California, Irvine
MA in Education, University of California, Irvine
BA in Anthropology, University of California, Irvine
BA in Public Health Policy, University of California, Irvine

Relevant Research Skills

		Google UXR (via Artech)	AT&T UXR	Graduate Researcher	Museum Experience Researcher
Qualitative Methods	Moderated usability studies	■	■	■	■
	Unmoderated usability studies	■	■		■
	Diary studies	■	■	■	
	Contextual inquiry		■	■	■
	Participatory design	■		■	
	Journey mapping	■	■	■	
	Card sorting			■	
Quantitative Methods	Descriptive statistics	■	■	■	■
	Inferential statistics		■	■	■
	Survey design	■	■	■	■
	A/B testing and experiments	■	■	■	■
Research Tools	SPSS, Stata, and R		■	■	■
	UserZoom		■		
	UserZoom Go/Validately	■			
	UserTesting		■		
	dscout	■	■		
	Qualtrics	■	■	■	
	Survey Monkey	■	■	■	