

Qian Yang

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I am a Ph.D. student in Human-Computer Interaction at Carnegie Mellon University. I design user experiences for interactive machine learning applications: from data-driven clinical decision support systems, to context-aware mobile services, to autonomous cars. Reflecting on this related vein of practice and research, I create design methods, patterns and prototyping toolkits that enable more people to better ideate feasible, meaningful and creative forms and functions of machine learning applications.

EDUCATION	Ph.D. in Human-Computer Interaction Carnegie Mellon University , Pittsburgh, PA, USA • Concentration: computer science; • Advisers: John Zimmerman and Aaron Steinfeld;	Sep. 2014 +
	M.Des. in Design Research Shanghai Jiao Tong University, Shanghai, China • Thesis: Modeling Perceptions and Aesthetics of Car Faces and Human Faces; • Awarded Graduate of the Year of Shanghai City	Sep. 2010 – Mar. 2013
	B.Eng. in Industrial Design, Minor in Business Administration Shanghai Jiao Tong University, Shanghai, China	Sep. 2006 – Jun. 2010
PROFESSIONAL EMPLOYMENT	Research Intern Microsoft Research , Machine Teaching Group, Redmond, WA • Design interactive machine learning tools that make possible "AI for everyone"	May. 2017 – Aug. 2017
	UX Research Intern Google , Android Auto, Mountain View, CA • Research and design intelligent in-car media consumption framework for use under divided attention	May. 2016 – Aug. 2016
	Advanced Design Strategist SAIC Group Technology Center, Shanghai, China	Mar. 2013 – Jul. 2014
	Head of Research & Project Manager Design Trend Institute (Consultancy), Shanghai, China • As the third employee of the institute, led more than 20 projects across diverse industries within 5 years, jointly making it the nationally highest ranked design research service; • Specialized in analyzing user behaviour and aesthetics with a combination of in-depth empirical study and in-scale data mining approaches; • Organized <i>Insight Shanghai</i> , the first and largest design trend conference in China; More than 100 Fortune500 companies attended from 2008 to 2012;	Aug. 2007 – Aug. 2012
	UX Designer Intern, INTEL System Software Developing Group	Mar. 2012 – Sep. 2012
	Product Research Intern, Philips, Consumer Lifestyle	Dec. 2011 – Mar. 2012
	Leading Research Intern, Asia Design Institute	Feb. 2010 – Jun. 2010
PUBLICATIONS (2014-)	Machine Learning as a Design Material: 1) Q. Yang , A. Scuito, J. Zimmerman, J. Forlizzi, Aaron Steinfeld, "Investigating How Experienced UX Designers Effectively Work with Machine Learning" to appear in <i>Proceedings of DIS'18</i> , Hong Kong, China, Jun. 2018. 2) Q. Yang , J. Suh, N. Chen, G. Ramos, "Grounding Interactive Machine Learning Tool Design in How Non-Experts Actually Build Models," to appear in <i>Proceedings of DIS'18</i> , Hong Kong, China, Jun. 2018. 3) Q. Yang , N. Banovic, J. Zimmerman, "Mapping Machine Learning Advances from HCI Research to Reveal Starting Places for Design Research," in <i>Proceedings of CHI '18</i> , Montréal, Canada, Apr. 2018. 4) Q. Yang , "Machine Learning as a UX Design Material: How Can We Imagine Beyond Automation, Recommenders, and Reminders?" in <i>Proceedings of The AAAI 2018 Spring Symposium on Designing the User Experience of Artificial Intelligence</i> , Stanford, CA, USA, Mar. 2018.	

- 5) **Q. Yang**, “The Role of Design in Creating Machine-Learning-Enhanced User Experience ,” in *The AAAI 2017 Spring Symposium on Designing the User Experience of Machine Learning Systems Technical Report SS-17-04*, Stanford, CA, USA, Mar. 2017. [pdf]
- 6) **Q. Yang**, A. Steinfeld, A. Tomasic, J. Zimmerman, “Planning Adaptive Mobile Experiences When Wireframing” in *Proceedings of DIS '16*, Brisbane, Australia, May. 2016. [pdf]
- 7) **Q. Yang**, “Bridging Machine Learning and Real World Complexities with Interaction Design,” in *Extended Abstracts of CHI '16 Workshop on Human-centered Machine Learning*, San Jose, CA, USA, May. 2016. [pdf]

Designing Data-Driven Support for High-Risk Clinical Decisions:

- 8) **Q. Yang**, J. Zimmerman, A. Steinfeld, L. Carey, J. Antaki, “Investigating the Heart Pump Implant Decision Process: Opportunities for Decision Support Tools to Help,” in *Proceedings of CHI '16*, San Jose, CA, USA, May. 2016. [pdf] - **CHI best paper honorable mention**
- 9) **Q. Yang**, M. Kanwar, J. Zimmerman, J. Antaki, L. Carey, “VAD Patient Selection: What Happens In Real-World Practice?” in *Abstracts of The International Society for Heart and Lung Transplantation (ISHLT) Conference 2016*, Washington D.C., USA, Apr. 2016.
- 10) **Q. Yang**, M. Kanwar, J. Antaki, L. Carey, J. Zimmerman “Patient Selection for Ventricular Assist Devices: What Happens In Real Practice?” in *The American Heart Association Fellows Research Day*, Pittsburgh, PA, USA Jan. 2016.
- 11) **Q. Yang**, J. Zimmerman, and A. Steinfeld, “Review of Medical Decision Support Tools: Emerging Opportunity for Interaction Design,” in *Proceedings of IASDR '15*, Brisbane, Australia, Nov. 2015. [pdf]

Designing Smart Transportation:

- 12) C. Basu, **Q. Yang**, D. Hungerman, A. Dragan, M. Singhal, “Do You Want Your Autonomous Car to Drive Like You?,” in *Proceedings of HRI '17*, Vienna, Austria, Mar. 2017. [pdf]
- 13) A. Steinfeld, L. Bloomfield, S. Amick, Y. Huang, **Q. Yang**, W. Odom, J. Zimmerman, “How Location-Aware Mobile Information Increases Accessibility to Transit,” under *Review for the Journal of Urban Technology*, Sep. 2016.
- 14) **Q. Yang**, J. Fu, “Car Face Aesthetic Model Based on Human Face Aesthetic Rules,” *Design Journal*, vol. 2, pp. 18–20, Feb. 2013.

HONORS (SELECTED)

CHML Fellowship in Digital Health	2017
The Pittsburgh Health Data Alliance, The Center for Machine Learning and Health	
ProSEED/Crosswalk Seed Grant	2017
Carnegie Mellon University	
SensiHub Student Fellowship	2017
AAAI Student Travel Scholarship	2017
The Association for the Advancement of Artificial Intelligence (AAAI)	
National Scholarship - top 0.1%	2009
The Ministry of Education of P.R.China	
Shanghai Jiao Tong University Fellowship (5 times, top 0.4%)	2006 – 2013
Chery Fellowship (top 0.1%)	2011
Graduate of the Year - top 0.1%	2013 & 2010
Government of Shanghai, China	
Student Leadership Award (2 times, top 0.2%)	2008 – 2009
Outstanding Student Award (3 times, top 0.2%)	2007 – 2009
Winner of Los Angeles Auto Show Design Challenge 2013	2013
As a member of SAIC Motor Design Studio; Press: Wired, The Guardian, Fast Company, autoweek, etc.;	

	Gold Award of SAP Interaction Design Workshop	2011
	Creativity Award of Volkswagen Future Design Competition	2011
	Honorable Mention of National Creative Technology Design Competition	2007
INVITED TALKS	Seminar & Workshop: Design Machine-learning-mediated User Experience Savannah College of Art and Design, Savannah, GA, USA	Nov. 2016
	Toward Machine-learning-friendly Automotive Interfaces SAIC Global HQ, Shanghai, China.	Aug. 2016
	Keynote: Rethinking the IQ and EQ of Computers International Embodied Interaction Design Seminar 2015, Beijing, China.	Jul. 2015
	Advanced Design Research in the Field Design Empowers Dreams Conference, Shanghai, China.	Jun. 2013
	Understanding Chinese Trend-setters' Lifestyle and Personal Value <i>Insight Shanghai</i> Design Trend Conference 2012, Shanghai, China.	Sep. 2012
	Chinese Sense of Luxury and its Trend <i>Insight Shanghai</i> Design Trend Conference 2011, Shanghai, China.	Sep. 2011
	Applying Developmental Psychology to Product Design Research Changhong Electronics HQ, Mianyang, China.	Jul. 2011
TEACHING	Guest Lecture on Designing AI <i>Graduate Design Studio II</i> , Carnegie Mellon University 05-712; Instructor: Peter Scupelli;	Spring 2018
	Teaching Assistant of <i>Designing Human-Centered Software</i> Instructor: Chris Harrison; Carnegie Mellon University 05-391 / 05-891;	Spring 2018
	Teaching Assistant of <i>User-Centered Research and Evaluation</i> Instructors: Amy Ogan and Chris Connors; Carnegie Mellon University 05-410 / 05-610;	Fall 2017
	Guest Lectures on Practical Design Research Automotive Design, Shanghai Jiao Tong University;	Spring 2013
PRESS (SELECTED)	<i>Interview with Qian Yang</i> , The Women in Tech Show (podcast) by Edaena Salinas.	Jan. 2018
	<i>An Ingenious Approach To Designing AI That Doctors Trust</i> , Fast Company.	Jan. 2018
	<i>Designers Aren't Prepared To Make AI – Here's How To Get Ready</i> , Fast Company.	Oct. 2017
	<i>LA Auto Show: Nature-Inspired Futuristic Concept Vehicles</i> , The Guardian	Dec. 2013
	<i>Outlandish Concept Cars Inspired by Nature</i> , WIRED	Dec. 2013
	<i>5 Crazy Personal Mobility Concepts—Inspired By Nature</i> , Fast Company	Dec. 2013
	<i>SAIC Wins LA Auto Show Design Challenge</i> , Autoweek	Nov. 2013
SERVICES	HCI PhD program Student Representative Carnegie Mellon University	Jan. 2015 – Jun. 2015
	Speaker, Young Women for STEM Google Recognition Night Penn State New Kensington, PA, USA	Jul. 2015
REFERENCES	Prof. John Zimmerman (adviser) Professor at Human-computer Interaction Institute, Carnegie Mellon University; johnz@cs.cmu.edu;	
	Prof. Aaron Steinfeld (co-adviser) Professor at Robotics Institute, Carnegie Mellon University; steinfeld@cmu.edu;	