

# Qian Yang

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I am a Ph.D. student in Human-Computer Interaction at Carnegie Mellon University. I design machine-learning-powered user experiences for multiple real-world, high-consequence 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 am developing a prototyping toolkit for practitioners to better ideate feasible, meaningful and creative AI-enhanced user experiences.

EDUCATION	<b>Ph.D. in Human-Computer Interaction</b> Sep. 2014 + <b>Carnegie Mellon University</b> , Pittsburgh, PA, USA <ul style="list-style-type: none"><li>• Advisers: Prof. John Zimmerman, Prof. Aaron Steinfeld;</li><li>• Emphasis area: computer science; Cumulative GPA: 4.0;</li></ul>
	<b>M.Des. in Design Research</b> Sep. 2010 – Mar. 2013 Shanghai Jiao Tong University, Shanghai, China
	<b>B.Eng. in Industrial Design, Minor in Business Administration</b> Sep. 2006 – Jun. 2010 Shanghai Jiao Tong University, Shanghai, China
PROFESSIONAL EMPLOYMENT	<b>Research Intern</b> May. 2017 – Aug. 2017 <b>Microsoft AI+Research</b> , Machine Teaching Group, Redmond, WA <ul style="list-style-type: none"><li>• Design interactive machine learning tools that make possible "AI for everyone"</li><li>• Mentored by Gonzalo Ramos.</li></ul>
	<b>UX Research Intern</b> May. 2016 – Aug. 2016 <b>Google</b> , Android Auto, Mountain View, CA
	<b>Advanced Design Strategist</b> Mar. 2013 – Jul. 2014 SAIC Group Technology Center, Shanghai, China
	<b>Head of Research &amp; Project Manager</b> Aug. 2007 – Aug. 2012 Design Trend Institute (Consultancy), Shanghai, China <ul style="list-style-type: none"><li>• 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;</li><li>• Specialized in analyzing user behaviour and aesthetics with a combination of in-depth empirical study and in-scale data mining approaches;</li><li>• Organized <i>Insight Shanghai</i>, the first and largest design trend conference in China; More than 100 Fortune500 companies attended from 2008 to 2012;</li></ul>
	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- )	<b>Machine-Learning-UX symbiosis:</b> <ol style="list-style-type: none"><li>1) <b>Q. Yang</b>, A. Steinfeld, J. Zimmerman, "Sketching Machine-Learning-Enhanced UX: Promoting a Matchmaking Approach," under <i>Submission to DIS'17</i>, Edinburgh, UK, Jun. 2017.</li><li>1) <b>Q. Yang</b>, "The Role of Design in Creating Machine-Learning-Enhanced User Experience ," in <i>The AAAI 2017 Spring Symposium on Designing the User Experience of Machine Learning Systems Technical Report SS-17-04</i>, Stanford, CA, USA, Mar. 2017.</li><li>2) <b>Q. Yang</b>, A. Steinfeld, A. Tomasic, J. Zimmerman, "Planning Adaptive Mobile Experiences When Wireframing" in <i>Proceedings of DIS '16</i>, Brisbane, Australia, May. 2016.</li><li>3) <b>Q. Yang</b>, "Bridging Machine Learning and Real World Complexities with Interaction Design," in <i>Extended Abstracts of CHI '16 Workshop on Human-centered Machine Learning</i>, San Jose, CA, USA, May. 2016.</li></ol>
	<b>Designing Data-Driven Support for High-Risk Clinical Decisions:</b> <ol style="list-style-type: none"><li>4) <b>Q. Yang</b>, J. Zimmerman, A. Steinfeld, L. Carey, J. Antaki, "Investigating the Heart Pump Implant Decision Process: Opportunities for Decision Support Tools to Help," in <i>Proceedings of CHI '16</i>, San Jose, CA, USA, May. 2016. - <b>best paper honorable mention (4%)</b></li></ol>

- 5) **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.
- 6) **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.
- 7) **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.

#### **Designing Smart Transportation:**

- 8) 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.
- 9) A. Steinfeld, L. Bloomfield, S. Amick, Y. Huang, **Q. Yang**, W. Odom, J. Zimmerman, “How Location-Aware Mobile Information Increases Accessibility to Transit,” under *Submission to CHI'17*, Sep. 2016.
- 10) **Q. Yang**, J. Fu, “Car Face Aesthetic Model Based on Human Face Aesthetic Rules,” *Journal of Design*, vol. 2, pp. 18–20, Feb. 2013.

<b>FELLOWSHIPS &amp; AWARDS</b>	<b>The Center for Machine Learning and Health Fellowship in Digital Health</b>	2017
	The Pittsburgh Health Data Alliance	
	ProSEED/Crosswalk Seed Grant	2017
	Carnegie Mellon University	
	Student Fellowship	2017
	SensiHub	
	AAAI Student Travel Scholarship	2017
	The Association for the Advancement of Artificial Intelligence (AAAI)	
	Best paper Honorable Mention, ACM CHI'16 - top 4%	2016
	<b>National Scholarship - top 0.1%</b>	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
	<b>Graduate of the Year - top 0.1%</b>	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	
<b>INVITED TALKS</b>	<b>Seminar &amp; Workshop:</b> Design Machine-learning-mediated User Experience	Nov. 2016
	Savannah College of Art and Design, Savannah, GA, USA	
	Toward Machine-learning-friendly Automotive Interfaces	Aug. 2016
	SAIC Global HQ, Shanghai, China.	
<b>Keynote:</b> Rethinking the IQ and EQ of Computers	Jul. 2015	
International Embodied Interaction Design Seminar 2015, Beijing, China.		
Advanced Design Research in the Field	Jun. 2013	
Design Empowers Dreams Conference, Shanghai, China.		

Understanding Chinese Trend-setters' Lifestyle and Personal Value  
*Insight Shanghai* Design Trend Conference 2012, Shanghai, China. Sep. 2012

Chinese Sense of *Luxury* and its Trend  
*Insight Shanghai* Design Trend Conference 2011, Shanghai, China. Sep. 2011

Applying Developmental Psychology to Product Design Research  
 Changhong Electronics HQ, Mianyang, China. Jul. 2011

**SERVICES** Peer review for CHI'15, CHI'17, HRI'17 and DIS'17 Sep. 2014 +

HCI PhD program Student Representative Jan. 2015 – Jun. 2015  
 Carnegie Mellon University

Speaker, Young Women for STEM Google Recognition Night Jul. 2015  
 Penn State New Kensington, PA, USA

**EXPERTISE** **Design Research:** contextual inquiry, grounded theory, affinity diagram, cultural probes, discourse analysis, service blueprint, etc.;

**Data Analysis & Mining:** Python, SQL, JMP/MS Excel, Weka, LightSide, R;

**Prototyping:** HTML/CSS, JavaScript, d3.js, Arduino, Processing, Adobe Creative Suite, Actionscript, Alias, Maya, SolidWorks, Rhino, AutoCAD;

**LANGUAGES** Mandarin: native proficiency, published writer since age 12;  
 English: full professional proficiency, TOEFL 111;  
 Japanese: limited working proficiency, JLPT N1;

**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;

Prof. Anthony Tomic  
 Director of Computational Data Science Program at Carnegie Mellon University;  
 tomasic@andrew.cmu.edu;

Prof. Sara Kiesler  
 Recipient of CHI Lifetime Achievement Award;  
 Professor at Human-Computer Interaction Institute, Carnegie Mellon University;  
 kiesler@cs.cmu.edu.