Amy Pavel

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Carnegie Mellon University
Postdoctoral Fellow
Human-Computer Interaction Institute
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Apple
Research Scientist
AI/ML
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EDUCATION

UC Berkeley, EECS — **Berkeley, CA**
PhD in Computer Science — Awarded 2019
Advisors: Björn Hartmann (Berkeley), Maneesh Agrawala (Stanford)
Additional committee members: Eric Paulos, Abigail De Kosnik

UC Berkeley, College of Engineering — **Berkeley, CA**
BS in Electrical Engineering and Computer Science — Awarded 2013

RESEARCH POSITIONS

Apple Inc, AI/ML – *Research Scientist (50% time)* — **Cupertino, CA**
Machine Intelligence Accessibility Group — 2019-Present

Carnegie Mellon University, HCII – *Postdoctoral Fellow (50% time)* — **Pittsburgh, PA**
Supervised by Professor Jeffrey P. Bigham — 2019-Present

UC Berkeley, Visual Computing Lab – *Graduate Researcher* — **Berkeley, CA**
Advised by Professors Björn Hartmann and Maneesh Agrawala — 2013-2019

Adobe, Creative Technologies Lab – *Research Intern* — **Seattle, WA**
Advised by Principal Scientist Dan Goldman — Summer 2014, Summer 2015

UC Berkeley, BiD Lab, Visual Computing Lab – *Undergraduate Researcher* — **Berkeley, CA**
Advised by Professors Björn Hartmann and Maneesh Agrawala — 2011-2013

PEER REVIEWED PUBLICATIONS

ACM UIST and *ACM CHI* are top conferences for technical HCI work. *NAACL* is a top conference for NLP work. Application-specific venues include *ACM ASSETS* (accessibility), *IEEE VR* (virtual reality), and *ACM SIGDIAL* (dialogue). I am listed as last author when I am the primary mentor on the project.

Yi-Hao Peng, Jeffrey P. Bigham, **Amy Pavel**. "Slidecho: Flexible Non-Visual Exploration of Presentation Videos" *Submitted to ASSETS 2021* — In submission

Prakhar Gupta, Jeffrey P. Bigham, Yulia Tsvetkov, **Amy Pavel**. "Controlling Dialogue Generation with Semantic Exemplars" *To appear at NAACL 2021* — June 2021

Xingyu Liu, Patrick Carrington, Xiang 'Anthony' Chen, **Amy Pavel**. "What Makes a Video Non-Visually Accessible?" *To appear at CHI 2021* — May 2021

Yi-Hao Peng, Joon Jang, Jeffrey P. Bigham, **Amy Pavel**. "Say it all: Authoring Non-Visually Accessible Presentations." *To appear at CHI 2021* — May 2021

Amy Pavel, Gabriel Reyes, Jeffrey P. Bigham. "Rescribe: Authoring and Automatically Editing Audio Descriptions." *UIST 2020* (~22% acceptance rate, 10 pages) – Highlighted in Future of CSCW/UIST Plenary, and UIST Keynote. — October 2020

Cole Gleason, Stephanie Valencia, Lynn Kirabo, Jason Wu, Anhong Guo, Elizabeth J. Carter, Jeffrey P. Bigham, Cynthia L. Bennett, **Amy Pavel**. "Disability and the COVID-19 Pandemic: Using Twitter to Understand Accessibility during Rapid Societal Transition." *ASSETS 2020* (28% acceptance rate, 10 pages) — October 2020

Cole Gleason, **Amy Pavel**, Himalini Gururaj, Kris M. Kitani, and Jeffrey P. Bigham. "Making GIFs Accessible." *ASSETS 2020* (28% acceptance rate, 10 pages) — October 2020

Jaylin Herskovitz, Jason Wu, Samuel White, **Amy Pavel**, Gabriel Reyes, Anhong Guo, and Jeffrey P. Bigham. "Making Mobile Augmented Reality Applications Accessible." *ASSETS 2020* (28% acceptance rate, 10 pages) — October 2020

Stephanie Valencia, **Amy Pavel**, Jared Santa Maria, Seunga (Gloria) Yu, Jeffrey P. Bigham, Henny Admoni. "Conversational Agency in Augmentative and Alternative Communication." *CHI 2020* (24.3% acceptance rate, 10 pages) – Best Paper Honorable Mention — May 2020

Cole Gleason, **Amy Pavel**, Emma McCamey, Christina Low, Patrick Carrington, Kris M. Kitani, Jeffrey P. Bigham. "Twitter A11y: A Browser Extension to Make Twitter Images Accessible." *CHI 2020* (24.3% acceptance rate, 10 pages) – Best Paper Honorable Mention — May 2020

Prakhar Gupta, Shikib Mehri, Tiancheng Zhao, **Amy Pavel**, Maxine Eskenazi and Jeffrey P. Bigham. "Investigating Evaluation of Open-Domain Dialogue Systems With Human Generated Multiple References." *SIGDIAL 2019* (10 pages) — October 2019

Cole Gleason, **Amy Pavel**, Xingyu Liu, Patrick Carrington, Lydia B. Chilton, Jeffrey P. Bigham. "Making Memes Accessible." *ASSETS 2019* (26% acceptance rate, 10 pages) — October 2019

Vincent Sitzmann*, Ana Serrano*, **Amy Pavel**, Maneesh Agrawala, Diego Gutierrez, Belen Masia, Gordon Wetzstein. "Shot Orientation Controls for Interactive Cinematography with 360 video." *IEEE VR 2018* (22.5% acceptance rate, 9 pages) — March 2018

Amy Pavel, Bjoern Hartmann, Maneesh Agrawala. "Shot Orientation Controls for Interactive Cinematography with 360 video." *UIST 2017* (22.5% acceptance rate, 9 pages) October 2017

Amy Pavel, Dan Goldman, Bjoern Hartmann, Maneesh Agrawala. "Vidcrit: Video-based Asynchronous Video Review." *UIST 2016* (20.6% acceptance rate, 12 pages) October 2016

Amy Pavel, Dan Goldman, Bjoern Hartmann, Maneesh Agrawala. "SceneSkim: Searching and Browsing Movies Using Synchronized Captions, Scripts and Plot Summaries." *UIST 2015* (23% acceptance rate, 10 pages) October 2015

Kurt Luther, Jay Tolentino, Wei Wu, **Amy Pavel**, Brian Bailey, Maneesh Agrawala, Bjoern Hartmann, Steven Dow. "Structuring, Aggregating, and Evaluating Crowdsourced Design Critique." *CSCW 2015* (28.3% acceptance rate, 13 pages) March 2015

Amy Pavel, Colorado Reed, Bjoern Hartmann, Maneesh Agrawala. "Video Digests: A Browsable, Skimmable Format for Informational Lecture Videos." *UIST 2014* (22.2% acceptance rate, 10 pages) October 2014

POSTERS, DEMOS, AND WORKSHOP PAPERS

Kundan Krishna, **Amy Pavel**, Benjamin Schloss, Jeffrey Bigham and Zachary Lipton. "Extracting Structured Data from Doctor-Patient Conversations By Predicting Noteworthy Utterances." *W3PHIAI 2020 Workshop Paper & Book Chapter in Explainable AI in Healthcare and Medicine: Building a Culture of Transparency and Accountability* February 2020

Christina Low*, Emma McCamey*, Cole Gleason, Patrick Carrington, Jeffrey P. Bigham, **Amy Pavel**. "Twitter A11y: A Browser Extension to Make Twitter Images Accessible." *ASSETS 2019* (Poster) October 2020

Kurt Luther, **Amy Pavel**, Wei Wu, Jay Tolentino, Maneesh Agrawala, Bjoern Hartmann, Steven Dow. "CrowdCrit: Crowdsourcing and Aggregating Visual Design Critique." *CSCW 2014* (Extended Abstract) March 2014

Kurt Luther, **Amy Pavel**, Wei Wu, Jay Tolentino, Maneesh Agrawala, Bjoern Hartmann, Steven Dow. "Amy Pavel, Floraine Berthouzoz, Bjoern Hartmann, Maneesh Agrawala." *TECHCON 2012* (Poster) October 2012

THESIS, PREPRINTS, AND TECHNICAL REPORTS

Amy Pavel. "Text-based Video Navigation." *PhD Thesis (Computer Science, EECS department). UC Berkeley Technical Report, EECS-2019-78.* Committee: Professors Björn Hartmann (Berkeley EECS), Maneesh Agrawala (Stanford), Eric Paulos (Berkeley New Media and EECS), and Abigail De Kosnick (Berkeley Department of Theater, Dance and Performance, and New Media). May 2019

Amy Pavel, Floraine Berthouzoz, Bjoern Hartmann, Maneesh Agrawala. "Browsing and Analyzing Command Structure of Large Collections of Image Manipulation Tutorials." *UC Berkeley Technical Report, EECS-2013-167* October 2013

AWARDS AND GRANTS

Selected for EECS Rising Stars	2020
Won program-wide DARPA evaluation	2020
CHI Honorable Mention	2020
CHI Honorable Mention	2020
Future of Work NSF Grant Co-PI	2019
Outstanding Graduate Student Instructor (UC Berkeley EECS)	2018
National Defense Science and Engineering Graduate Fellowship (NDSEG)	Fall 2015-2018
Sandisk Graduate Fellowship	Spring 2014
UC Berkeley EECS Excellence Award	Fall 2013
CRA Outstanding Undergraduate Researcher – *Honorable Mention*	Spring 2013
Intel SRC Undergraduate Research Opportunities	Fall 2011-2013

SERVICE

Program Committees

SIGGRAPH Asia Technical Papers Committee	Summer 2021
UIST PC Committee Member	Summer 2021
CHI PC Committee Member (Subcommittee: Computational Interaction)	Fall 2020
UIST PC Committee Member	Summer 2020

Conference Organizing

HCOMP Crowdcamp Co-Chair	Fall 2021
UIST Digital Participation Co-Chair	Fall 2021

Student Volunteering

UIST PC Meeting, Student Volunteer	Summer 2016
CHI Conference, Student Volunteer	Spring 2016
CHI PC Meeting, Student Volunteer	Spring 2016
UIST PC Meeting, Student Volunteer	Summer 2015

Department Committees

Faculty Search Student Committee (UC Berkeley, Jacobs)	Spring 2018
Graduate Admissions Committee (UC Berkeley, HCI)	Winter 2016/2017
Faculty Search Student Committee (UC Berkeley, EECS)	Spring 2015

Peer Review

UIST – 2014, 2015, 2016, 2017, 2018, 2019, 2020* (* special recognition)
CHI – 2013, 2015, 2016, 2017*, 2018**, 2019, 2020 (* special recognition)
CSCW – 2018
SCIVIS – 2018
SIGGRAPH Asia – 2017
MM – 2016

Local and Online Community

Tech Help Desk – Community Forge (Pittsburgh Small Business Incubator)	2019-2020
Accessibility Seminar Co-Organizer – CMU	2019-2020

TEACHING

UC Berkeley EECS, CS 160 – Instructor Summer 2018
CS 160: User interface design and development, 77 students
Course staff of 5 TAs and 2 Readers
Course website: `amypavel.com/teaching/cs160su18/`
Ratings: `hkn.eecs.berkeley.edu/coursesurveys/course/CS/160`

UC Berkeley EECS, CS 160 – Graduate student instructor Summer 2017
CS 160: User interface design and development, taught by Cesar Torres
Served as the only GSI for the course of 60 students.

UC Berkeley New Media, NWMEDIA 190 – Student project advisor Fall 2016
NWMEDIA 190: Making Sense of Cultural Data
Served as a "Data Science Pro" for the class by guiding and providing feedback on student projects throughout the semester.

ASUC Berkeley, CS Kickstart – Instructor Summer 2012
Designed and co-taught CS curriculum to incoming freshmen women interested in pursuing an EECS degree.

Berkeley Engineers and Mentors – Teacher 2009-2010
Co-taught hands-on science and engineering curriculum for 4th and 5th grade students at LeConte Elementary School (Berkeley area)

MENTORSHIP

Yi-Hao Peng. "Making Lectures Non-Visually Accessible" Summer 2020
Incoming Graduate, CMU.

Joon Jang. "Understanding and Improving Presentation Accessibility" Spring/Summer 2020
Undergraduate, CMU.

Xingyu (Bruce) Liu. "Automated Metrics for Predicting Video Accessibility" Spring/Summer 2020
Undergraduate, CMU. Next: UCLA PhD student.

Junhan (Judy) Kong. "Generating AR Tutorials by Demonstration" Spring 2020
Undergraduate, CMU. Next: UW PhD student.

Kimberly Do. "How does expertise impact video description?" Summer 2020
Undergraduate, Georgia Tech (REU program).

Annika Esau. "Can we control dialog generation using scripts?" Summer 2020
Undergraduate, University of Idaho (REU program).

Dena Sabha. "Generating AR Tutorials" Summer 2020
Undergraduate, UW (REU program).

Christina Low. "Making Social Media Images Accessible" Summer 2019

Undergraduate, Stony Brook University (REU program).

Emma McCamey. "Making Social Media Images Accessible" Summer 2019
Undergraduate, Virginia Commonwealth University (REU program).

Tonya Nguyen. "SlideSpecs: Collaborative Presentation Feedback" Fall 2018
Undergraduate, UC Berkeley. Next: UC Berkeley PhD student.

Kaushik Kasi. "Detecting Slide Transitions for Facilitating Feedback" Spring 2018
Undergraduate, UC Berkeley. Next: Apple.

Vivian Liu. "How is food represented on Instagram?" Fall 2016
Undergraduate, UC Berkeley. Next: Columbia PhD student.

INVITED TALKS

"Human AI Systems for Making Videos Useful." *Cornell University*. Virtual Event. Spring 2021
"Human AI Systems for Making Videos Useful." *EPFL*. Virtual Event. Spring 2021
"Human AI Systems for Making Videos Useful." *University of Texas, Austin*. Virtual Event. Spring 2021
"Human AI Systems for Making Videos Useful." *University of Southern California*. Virtual Event. Spring 2021
"Human AI Systems for Making Videos Useful." *University of Pennsylvania*. Virtual Event. Spring 2021
"Human AI Systems for Making Videos Useful." *Johns Hopkins University*. Virtual Event. Spring 2021
"Human AI Systems for Making Videos Useful." *University of Maryland, College Park*. Virtual Event. Spring 2021
"Human AI Systems for Making Videos Useful." *Emory University*. Virtual Event. Spring 2021
"Human AI Systems for Making Videos Useful." *University of Utah*. Virtual Event. Spring 2021
"Human AI Systems for Making Videos Useful." *Adobe Research*. Virtual Event. Spring 2021

"Describing Videos." *CMU HCII Seminar*. Pittsburgh, PA. Summer 2020

"Generating Anti-scam Dialogue." *DARPA PI Meeting*. Washington, DC. Spring 2020

"Text-based Video Navigation." *Apple*. Seattle, WA. Summer 2019

"Text-based Video Navigation." *CMU Course: Human-AI Interaction*. Pittsburgh, PA. Fall 2019

"What is HCI?" *UC Berkeley Course: CS 10*. Berkeley, CA. Spring 2019

"What is HCI?" *UC Berkeley Course: CS 10*. Berkeley, CA. Fall 2018

"SceneSkim: Searching and Browsing Movies Using Synchronized Captions, Scripts and Plot Summaries." *LAUC-B conference: "Focus on the Visual: Digital Humanities and Libraries"*. Berkeley, CA. Spring 2016

"SceneSkim: Searching and Browsing Movies Using Synchronized Captions, Scripts and Plot Summaries." *Pixar*. Emeryville, CA. Fall 2015

"Video Digests: A Browsable, Skimmable Format for Informational Lecture Videos." *BEARS at UC Berkeley*. Berkeley, CA. Fall 2014

"SceneSkim: Searching and Browsing Movies Using Synchronized Captions, Scripts and Plot Summaries." *Berkeley Course: NWMEDIA 190: Making Sense of Cultural Data*. Berkeley, CA. Spring 2014

"Automatically Extracting Command Names from Online Tutorials." *Visual Computing Lab Retreat*. Bodega Bay, CA. Fall 2011

SELECTED PRESS

"'I Wish We Could Connect on This Level.' Memes Still Aren't Accessible to People Who Are Blind. What's Being Done About It?" Rachel E. Greenspan, *Time*. January 2020

"This app helps you find a particular scene in a movie - genius!" Paul Mallon, *Independent.ie*. November 2015

"SceneSkim movie app does exactly what it says it would" Timothy J. Seppala, *Engadget*. November 2015

"SceneSkim Lets You Quickly Find a Scene, Dialogue From a Movie or TV Show" Manish Singh, *Gadgets 360*. November 2015