

## ELDON SCHOOP

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### RESEARCH INTERESTS

Human-Computer Interaction, Machine Learning, ML Interpretability, Hardware Prototyping

### EDUCATION

University of California at Berkeley, Berkeley, CA  
**Ph.D Student in Computer Science; M.S. Computer Science, Dec 2018** 2016 – Expected 2021

University of California at Berkeley, Berkeley, CA  
**B.S. in Electrical Engineering and Computer Science** 2013 – 2016

### RESEARCH EXPERIENCE

University of California at Berkeley, Berkeley, CA  
**Graduate Student Researcher with Björn Hartmann** Aug 2016 – Present

University of California at Berkeley, Berkeley, CA  
**Undergraduate Student Researcher with Björn Hartmann** Jan 2015 – May 2016

### PUBLICATIONS

**Eldon Schoop**, Forrest Huang, Björn Hartmann. [UMLAUT: Debugging Deep Learning Programs using Program Structure and Model Behavior.](#) *CHI 2021.* 2021

**Eldon Schoop**, Forrest Huang, Björn Hartmann. [SCRAM: Simple Checks for Realtime Analysis of Model Training for Non-Expert ML Programmers.](#) *ICML 2020 Workshop on Human-in-the-Loop Learning.* (Reprint). 2020

**Eldon Schoop**, Forrest Huang, Björn Hartmann. [SCRAM: Simple Checks for Realtime Analysis of Model Training for Non-Expert ML Programmers.](#) *CHI 2020 Extended Abstracts.* 2020

Forrest Huang, **Eldon Schoop**, David Ha, John Canny. [Scones: Towards Conversational Authoring of Sketches.](#) *IUI 2020.* 2020

**Eldon Schoop**, James Smith, Björn Hartmann. [HindSight: Enhancing Spatial Awareness by Sonifying Detected Objects in Real-Time 360-Degree Video.](#) *UC Berkeley EECS Technical Report (Masters Thesis).* December 2018. 2018

**Eldon Schoop**, Forrest Huang, Nathan Khuu, Björn Hartmann. [MakerLens: What Sign-In, Reservation and Training Data Can \(and Cannot\) Tell You About Your Makerspace.](#) *ISAM 2018.* 2018

**Eldon Schoop**, James Smith, Björn Hartmann. [HindSight: Enhancing Spatial Awareness by Sonifying Detected Objects in Real-Time 360-Degree Video.](#) *CHI 2018.* 2018

**Eldon Schoop**, Chris Myers, Björn Hartmann. [MakerPass: A Multiplatform Access Control System for Academic Makerspaces.](#) *ISAM 2017 Posters.* 2017

Michelle Nguyen and **Eldon Schoop**, Mitchell Karchemsky, Valkyrie Savage, Björn Hartmann, Sean Follmer. [Drill Sergeant: Supporting Physical Construction Projects through an Ecosystem of Augmented Tools.](#) *Berkeley EECS Technical Report.* 2016

**Eldon Schoop** and Michelle Nguyen, Daniel Lim, Valkyrie Savage, Sean Follmer, Björn Hartmann. [Drill Sergeant: Supporting Physical Construction Projects through](#)

an Ecosystem of Augmented Tools. *CHI 2016 Extended Abstracts*. **Best Paper, late-breaking work.**

2016

## WORK EXPERIENCE

Google LLC, Cambridge, MA

### Research Intern

Research in HCI and ML domains (visualization, interpretability). Worked with the People and AI Research (PAIR) team. Advised by Michael Terry.

Aug 2020 – Dec 2020

LookDeep Inc., Oakland, CA

### Machine Learning Intern

Prototyped and productionized several ML pipelines using state-of-the-art neural networks for vision tasks in healthcare. Developed initial technical demo and internal data visualization tools. Contributed to open source ML.

May 2019 – Aug 2019

Jacobs Institute for Design Innovation, Berkeley, CA

### Project Lead and Principal Engineer, MakerPass

Directing the MakerPass engineering team, developed access control system for the Jacobs Institute makerspaces and several other shops at UC Berkeley.

Sep 2014 – May 2020

InnoQuant Inc., Berkeley CA

### Co-Founder and Chief Executive Officer

Developed a research-backed innovation assessment. Partnered with consulting firms to drive transformational change in organizations around the globe.

Nov 2016 – Oct 2018

Yelp Inc., San Francisco, CA

### Software Engineering Intern (Search UX)

Project lead for internal data visualization tool to discover, evaluate, and improve user search experiences.

May 2016 – Aug 2016

Yelp Inc., San Francisco, CA

### Software Engineering Intern (Core Web)

Developed a tool to visualize web code profiling information, presenting line-by-line performance statistics to reduce technical debt.

Aug 2015 – Dec 2015

Zino Systems International, Los Angeles, CA

### Founder and Technical Consultant

Architected and implemented IT solutions for consumers and businesses.

Aug 2013 – Aug 2015

## TEACHING

University of California at Berkeley, Berkeley, CA

### Instructor, Design Studio (14 Days, Hardware Prototyping for Transfer Students)

Summer 2020, 2019, 2018

University of California at Berkeley, Berkeley, CA

### Guest Lecturer, Machine Learning for Startups; Learn2Launch at Berkeley

Spring 2020

University of California at Berkeley, Berkeley, CA

### Graduate Student Instructor, LS 25: Responsible Design from Bits to Buildings

Fall 2019

University of California at Berkeley, Berkeley, CA

### Graduate Student Instructor, DES INV 190-2: Global Product Development

Spring 2019

University of California at Berkeley, Berkeley, CA

### Instructor, DES INV 190E-1: Interactive Device Design

Summer 2018

University of California at Berkeley, Berkeley, CA

### Graduate Student Instructor, CS160: User Interface Design

Spring 2018

University of California at Berkeley, Berkeley, CA

**Instructor, T-PREP CS (1 Week, CS Bootcamp for Transfer Students)**

**Aug 2015**

### AWARDS AND HONORS

Nominated for Apple Ph.D Fellowship (1 of 5), <i>UC Berkeley</i>	<b>2019</b>
Finalist for Snap Research Ph.D Fellowship, <i>Snap Inc</i>	<b>2019</b>
Nominated for Microsoft Ph.D Fellowship (1 of 3), <i>UC Berkeley EECS</i>	<b>2018</b>
Innovation by Design Award Finalist, <i>Fast Company Magazine</i>	<b>2016</b>
Best Late-Breaking Work Award, <i>ACM CHI Conference</i>	<b>2016</b>
Honorable Mention, <i>NSF Graduate Research Fellowship</i>	<b>2016</b>
Warren Y. Dere Design Award, <i>UC Berkeley</i>	<b>2015</b>
IEEE Eta Kappa Nu (HKN) Honor Society, <i>Mu Chapter, UC Berkeley</i>	<b>2014</b>
Leadership Award Scholar, <i>UC Berkeley</i>	<b>2013</b>

### ADVISING

Purva Gupta, Peng Gu, Sikai Yin, Zetian Xiao, Zhuoyue Wang (CS M.Eng)

**Aug 2019 - May 2020**

James Smith (Undergraduate), now at UC Berkeley (CS PhD)

**Jun 2017 - Aug 2018**

### PROFESSIONAL ACTIVITIES

Advising startups on technical and business strategy

Technical Advisor, *OSAA Medical Device Innovation Collider*

**Sep 2016 - Jan 2017**

Reviewer, *CHI, UIST, CSCW, VIS, MobileHCI. Outstanding review recognition (CHI 2019).*

### SERVICE

President, *Berkeley CS Graduate Student Association*

**Aug 2020 - Present**

Co-President, *Berkeley CS Graduate Student Association*

**Sep 2019 - Aug 2020**

Super User, *CITRIS Invention Lab*

**Jan 2015 - Aug 2019**

EECS Department Relations, Industrial Relations, *HKN Mu Chapter*

**Sep 2014 - May 2016**

Finance Committee Member, *UC Berkeley Engineering Student Council*

**Aug 2014 - Dec 2014**

Co-Founder and President, *LA Pierce College Robotics Team*

**Dec 2010 - June 2013**

### MEDIA COVERAGE

Woo, Kasey. CITRIS Invention Lab Superuser Spotlight: Eldon Schoop (PhD, CS). *CITRIS News*. 2020.

Vu, Linda. Prepping students to become Berkeley engineers. *Berkeley Engineering*. 2019.

Mukai, Mason. Nisum Doubles Down on Measurable Innovation in Partnership with InnoQuant. *Press Release*. 2018.

Brownlee, John. New To The Wood Shop? These Smart Power Tools Coach You Through It. *Fast Company*. 2016.

Mendoza, Maricar. Robotics tournament at Pierce College gets kids interested in technology. *LA Daily News*. 2013.