

Sharon Zhang

CONTACT

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INTERESTS

Visual program induction, creative tools, video analysis, computer vision, computer graphics, human-computer interaction.

EDUCATION

2021 - Current **Stanford University**
PhD in Computer Science
Advisor: Maneesh Agrawala

2017 - 2021 **Princeton University**
A.B. in Mathematics with honors · Minor in Computer Science
Thesis: *Contextual Bias and Interpretability in Visual Classification*
Advisor: Olga Russakovsky

RESEARCH EXPERIENCE

2020 - 2021 **Visual AI Lab, Princeton University**
Advisor: Olga Russakovsky
Investigated interpretability methods and contextual bias mitigation in visual classifiers.
Team member for the Machine Learning Reproducibility Challenge.

2020 **Department of Mathematics, Princeton University**
Advisor: Amit Singer
Worked on algorithms for product manifold learning.

2019 **SMALL REU, Williams College**
Advisor: Susan Loepp
Undergraduate researcher in the 2019 Commutative Algebra cohort.

INDUSTRY EXPERIENCE

2021 **Research Intern, Google**
Worked on layered video representations with the Visual Dynamics team. Hosted by Jonathan Huang and Vivek Rathod.

2020 **Software Engineering Intern, Google**
Hosted by the Android Camera Machine Intelligence team. Designed and implemented an open-sourced API for Android developers to incorporate Google motion photos.

PUBLICATIONS

Sunnie S. Y. Kim, **Sharon Zhang**, Nicole Meister, Olga Russakovsky. "[Re] Don't Judge an Object By It's Context: Overcoming Contextual Bias." Machine Learning Reproducibility Challenge 2020. In *ReScience C Journal*.

<https://openreview.net/forum?id=PRXM8-O9PKd>.

Sharon Zhang, Amit Moscovich, Amit Singer. "Product Manifold Learning." In *Artificial Intelligence and Statistics (AISTATS)*, 2021. arxiv.org/abs/2010.09908.

Erica Barrett*, Emil Graf*, Kimball Strong*, **Sharon Zhang***, S. Loepp. "Cardinalities of Prime Spectra of Precompletions." *AMS Contemporary Mathematics: "Commutative Algebra: 150 Years with Roger and Sylvia Wiegand."* **773** (2021), 133–152. arxiv.org/abs/1911.06648.

Erica Barrett*, Emil Graf*, Kimball Strong*, **Sharon Zhang***, S. Loepp. "Structure of spectra of precompletions." *Rocky Mountain J. Math.* **50** (2020), no. 6, 1965–1988.

[doi:10.1216/rmj.2020.50.1965](https://doi.org/10.1216/rmj.2020.50.1965).

TALKS

Sharon Zhang and Emil Graf. 2019. "Prime Ideals of a Local Ring and Prime Ideals of Its Completion." MathFest 2019. 31 Jul 2019 – 3 Aug 2019. Cincinnati, OH, USA.

AWARDS

2022	Brown Institute for Media Innovation Magic Grant
2021	Middleton Miller '29 Prize, <i>awarded for best independent work in mathematics</i>
2021	NSF Graduate Research Fellowship Honorable Mention

COMPUTER SKILLS

<i>Languages</i>	Python, Java, HTML/CSS, C/C++, Linux, shell scripting
<i>Software & Tools</i>	JAX, PyTorch, TensorFlow, Git, CVX, \LaTeX , Adobe Creative Suite

ACTIVITIES

2021	Reviewer, AISTATS
2020	Undergraduate TA, COS 429: Computer Vision
2019	Peer Tutor, MAT 215: Honors Analysis
2019	Peer Tutor, COS 126: Introduction to Computer Science

October 12, 2022