

EKTA PRASHNANI

Senior Research Scientist, NVIDIA | <http://prashnani.github.io>

PROFESSIONAL EXPERIENCES

- MAR 2026 - Present Senior Research Scientist, Human Performance and Experience
NVIDIA Research, Santa Clara, California
Research topics: gaming AI, world foundation models, computational genomics, trustworthy use of generative AI, perceptual metrics.
- APR 2022 - Research Scientist, Human Performance and Experience
MAR 2026 NVIDIA Research, Santa Clara, California
Research interests: gaming AI, world foundation models, computational genomics, trustworthy use of generative AI, perceptual metrics.
- JULY 2019 - Ph.D. intern: perception research for videos
JUNE 2020 NVIDIA Research, Santa Clara, California
Mentors: Iuri Frosio, Orazio Gallo, Joohwan Kim, and Josef Spjut
Noise-aware training strategies for video-saliency prediction from noisy gaze data.
- JUNE 2016 - Ph.D. intern: Low-light image denoising using flash photography
SEPT 2016 Adobe Research, San Jose, California
Advisors: Sunil Hadap, and Kalyan Sunkavalli
Flash-based relighting of images for denoising low-light versions of the same scenes.
- JUNE 2015 - Ph.D. intern: 3D Scene understanding
SEPT 2015 Ricoh Innovations Corp., Menlo Park, California
Advisors: Silvio Savarese, Kathrin Berkner, and Jorge Moraleda
Single-image rectification leveraging scene understanding.
- JUNE 2014 - Ph.D. intern: Image animation using video examples
SEPT 2014 Nokia Technologies, Sunnyvale, California
Advisors: Maneli Noorkami, and Daniel Vaquero
Phase-based animation of periodically-moving elements in images from videos.

PUBLICATIONS AND PREPRINTS

Seeing What Matters: Generalizable AI-generated Video Detection with Forensic-Oriented Augmentation, Riccardo Corvi, Davide Cozzolino, **Ekta Prashnani**, Shalini De Mello, Koki Nagano, Luisa Verdoliva, *Neural Information Processing Systems (NeurIPS)*, 2025.

Unmasking Puppeteers: Leveraging Biometric Leakage to Disarm Impersonation in AI-based Video-conferencing, Danial Samadi Vahdati, Tai Duc Nguyen, Koki Nagano, David Luebke, Orazio Gallo, **Ekta Prashnani**, Matthew Stamm, *Neural Information Processing Systems (NeurIPS)*, 2025.

Fluctuation Structure Predicts Genome-wide Perturbation Outcomes, Benjamin Kuznets-Speck, Leon Schwartz, Hanxiao Sun, Madeline E Melzer, Nitu Kumari, Benjamin Haley, **Ekta Prashnani**, Suriyanarayanan Vaikuntanathan, Yogesh Goyal, *in review*, 2025.

GalA: A Zero-Shot Gaming Language-Action Model for Player Guidance Captioning, Leonard Salewski*, **Ekta Prashnani***, Peter Xenopoulos, Ben Boudaoud, Hendrik Lensch, Iuri Frosio, Joohwan Kim, *in review*, 2025.

Avatar Fingerprinting for Authorized Use of Synthetic Talking-Head Videos, **Ekta Prashnani**, Koki Nagano, Shalini De Mello, David Luebke, Orazio Gallo, *The European Conference on Computer Vision (ECCV)*, 2024.

Generalizable Deepfake Detection with Phase-Based Motion Analysis, **Ekta Prashnani**, Micheal Goebel, B. S. Manjunath, *IEEE Transactions on Image Processing*, 2024.

LOCL: Learning Object-Attribute Compositionality using Localization, Satish Kumar, A S M Iftekhar, **Ekta Prashnani**, B. S. Manjunath, *British Machine Vision Conference*, 2022.

Noise-Aware Video Saliency Prediction, **Ekta Prashnani**, Orazio Gallo, JooHwan Kim, Josef Spjut, Pradeep Sen, Iuri Frosio, *British Machine Vision Conference*, 2021.

PieAPP: Perceptual Image-Error Assessment through Pairwise Preference, **Ekta Prashnani***, Herbert Cai*, Yasamin Mostofi, Pradeep Sen, *Computer Vision and Pattern Recognition (CVPR)*, 2018.

A Phase-based Approach for Animating Images using Video Examples, **Ekta Prashnani**, Maneli Noorkami, Daniel Vaquero, Pradeep Sen, *Computer Graphics Forum*, August 2016.

PATENTS (PENDING / GRANTED)

- MAY 2021 Techniques for authenticating users during computer-mediated interactions
Publication number: US20240370536A1
- MAY 2021 Gaze determination using one or more neural networks
Publication number: US20210132688A1
- DEC 2019 Pair-wise or n-way learning framework for error and quality estimation
Publication number: WO2019236560A1
- FEB 2018 Single Image Rectification
Patent number: US9904990B2
- JULY 2016 Methods and apparatus for processing motion information images
Publication number: WO2016108847A1
- MAY 2015 Local Scale, Rotation and Position Invariant Word Detection for Optical Character Recognition
Patent number: US9025877B2

EDUCATION

- MAR 2022 **Doctor of Philosophy, Electrical and Computer Engineering**
University of California, Santa Barbara
Thesis: Data-driven Methods for Evaluating the Perceptual Quality and Authenticity of Visual Media
Advisor: B. S. Manjunath
- JUNE 2015 **Master of Science, Electrical and Computer Engineering**
University of California, Santa Barbara
- AUG 2013 **Bachelor of Technology, Electrical Engineering, with a minor in Computer Science**
Indian Institute of Technology, Gandhinagar
Capstone project: Light fields for multi-perspective stereoscopy

PROFESSIONAL ACTIVITIES

Co-chair for the Workshop on Computer Vision for Videogames at CVPR 2025 and ECCV 2024.

Reviewer for 150+ publications for venues across computer vision and machine learning disciplines, including Transactions on Image Processing; NeurIPS; Transactions on Pattern Analysis and Machine Intelligence; Journal of Electronic Imaging; Siggraph Asia 2020; ECCV, CVPR ICCV since 2021.

AWARDS

- OCT 2021 ICCV 2021 Doctoral Consortium
- JUNE 2021 Dissertation fellowship awarded by the UCSB ECE department
- JULY 2019 USD 80,000 grant for Google Cloud Platform (Google Cloud for Startups, Surge)
- MAY 2019 Outstanding Teaching Assistant (Dept. of Electrical and Computer Engg. at UCSB)
- MAY 2018 Outstanding Teaching Assistant (Dept. of Electrical and Computer Engg. at UCSB)
- APR 2018 Google Travel Grant for CVPR2018
- DEC 2017 Semi-finalist for Qualcomm Innovation Fellowship
- SEPT 2017 AI Grant Fellowship (with USD 20,000 on Google Cloud Platform)
- DEC 2015 Harold Frank scholarship at UCSB

TEACHING

- SEPT 2020 - Teaching assistant (one course per quarter): Introduction to Digital
JUNE 2021 Image and Video Processing, Introduction to Computer Vision, Introduction to Deep Learning.

- JULY 2020 - Research mentor for high school students (UCSB Research Mentorship Program)
AUG 2020 Design and mentorship of summer research for high-school students related to deep generative models for 3D modeling and image generation.

- SEPT 2017 - Teaching assistant: capstone projects (electrical engineering)
JUNE 2019 Technical mentorship to senior undergraduate capstone projects for applications of machine learning to medical imaging (position held for two academic years).

- JULY 2017 - Research mentor for high school students (UCSB Research Mentorship Program)
AUG 2017 Designed and mentored summer research projects for four high-school students involving deep learning for object detection and image restoration.

- SEPT 2016 - Teaching assistant: capstone projects (electrical engineering)
JUNE 2017 Technical mentorship to senior undergraduate capstone projects in the field of computer vision and machine learning (one team secured the *Best Technical Capstone project* award for their project on image super-resolution).

REFERENCES

- Prof. B.S. Manjunath: manj@ucsb.edu (Professor, Dept. of Electrical and Computer Engineering)
- Dr. Iuri Frosio: ifrosio@nvidia.com (Principal Research Scientist, Nvidia)
- Dr. Orazio Gallo: ogallo@nvidia.com (Principal Research Scientist, Nvidia)