

EKTA PRASHNANI

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EDUCATION

- present* **Doctor of Philosophy, Electrical and Computer Engineering**
University of California, Santa Barbara
Research interest: deep-learning-based perceptual metrics for images, attention modeling for videos, deep learning from noisy/limited data for perceptual tasks
GPA: 3.84/4
- JUNE 2015 **Master of Science, Electrical and Computer Engineering**
University of California, Santa Barbara
GPA: 3.82/4
- 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
GPA: 8.44/10

PUBLICATIONS

Ekta Prashnani, Orazio Gallo, Joohwan Kim, Josef Spjut, Pradeep Sen, Iuri Frosio, "Noise-Aware Saliency Prediction for Videos with Incomplete Gaze Data", *In Review; preprint: arXiv:2104.08038*.

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

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

GRADUATE INTERNSHIPS

- JULY 2019 - Perception research for videos (*patents pending*)
JUNE 2020 Nvidia Research, Santa Clara, California
Advisors: Iuri Frosio, Orazio Gallo, Joohwan Kim, and Josef Spjut
Noise-aware training strategies for video-saliency prediction from noisy gaze data.
- JUNE 2016 - Low-light image denoising using flash photography
SEPT 2016 Adobe Research, San Jose, California
Advisors: Sunil Hadap, and Kalyan Sunkavalli
Explored the use of flash-based relighting of images for denoising low-light versions of the same scenes.
- JUNE 2015 - 3D Scene understanding for correcting geometric distortions (*patent granted*)
SEPT 2015 Ricoh Innovations Corp., Menlo Park, California
Advisors: Silvio Savarese, Kathrin Berkner, and Jorge Moraleda
Developed a novel algorithm to utilize prior knowledge obtained from scene understanding to rectify single images.
- JUNE 2014 - Image animation using video examples (*patent pending*)
SEPT 2014 Nokia Technologies, Sunnyvale, California
Advisors: Maneli Noorkami, and Daniel Vaquero
Developed a novel phase-based approach to animate natural images by imparting gentle motion to objects using a similar video example provided by the user.

PATENTS (PENDING / GRANTED)

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

AWARDS

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
AUG 2013	Dean's list for academic excellence at IIT Gandhinagar

TEACHING

SEPT 2020 - JUNE 2021	Teaching assistant (one course per quarter): Introduction to Digital Image and Video Processing, Introduction to Computer Vision, Introduction to Deep Learning.
JULY 2020 - AUG 2020	Research mentor for high school students (UCSB Research Mentorship Program) Design and mentorship of summer research for high-school students related to deep generative models for 3D modeling and image generation.
SEPT 2017 - JUNE 2019	Teaching assistant: capstone projects (electrical engineering) Technical mentorship to senior undergraduate capstone projects for applications of machine learning to medical imaging (position held for two academic years).
JULY 2017 - AUG 2017	Research mentor for high school students (UCSB Research Mentorship Program) Designed and mentored summer research projects for four high-school students involving deep learning for object detection and image restoration.
SEPT 2016 - JUNE 2017	Teaching assistant: capstone projects (electrical engineering) Technical mentorship to senior undergraduate capstone projects in the field of computer vision and machine learning (one team secured the <i>Best Technical Capstone project</i> award for their project on image super-resolution).

REVIEWING

Transactions on Image Processing, NeurIPS SVRHM workshop, Transactions on Pattern Analysis and Machine Intelligence, Journal of Electronic Imaging, Siggraph Asia 2020, CVPR 2021, ICCV 2021

REFERENCES

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