ASSAF SHOCHER

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EDUCATION & ACADEMIC EXPERIENCE

University of California, Berkeley- Postdoctoral fellow. (2021 –)

- Advisor: Prof. Alexei A. Efros
- Field: Artificial intelligence; Computer Vision and Machine Learning.
- Fellowships: Rothschild Postdoctoral Fellowship, Fulbright Postdoctoral Fellowship.

Weizmann Institute of Science – M.Sc., Ph.D. Math&CS Dept. (2015 – 2021)

- Advisor: Prof. Michal Irani.
- Field: Artificial intelligence; Computer Vision and Machine Learning.
- Thesis title: Deep Internal Learning.
- Direct PhD track.
- John F. Kennedy Award for outstanding Ph.D.
- Outstanding M.Sc. Award.
- Teaching:
  - Lecturer; Deep Learning for Computer Vision (Spring 2021, Fall 2022).
  - TA; Advanced Topics in Deep-Learning and Computer Vision (Springs 2016-2020).
  - TA; Introduction to Computer Vision (Fall 2016, 2017).

Ben-Gurion University – B.Sc.- Physics, B.Sc.- Electrical Engineering. (2011 – 2014)

- EE Specializations: Signal Processing and Electro-Optics.
- Graduated with honors.
- Best Student Final Project Award and Scholarship.

JOB EXPERIENCE

Research Intern; Google Inc. (2019)

Academic research, Deep Generative Models. Advised by Prof. William T. Freeman.

Lecturer; Primrose Deep Learning Academy (2016 – 2021)

Teaching full year courses of Machine Learning and Deep Learning from theory to practice.

Data Scientist; EverythingMe (2015)

Machine Learning for the goal of a mobile device that understands the user better.

Co-Founder and Machine Learning team leader; Prophit (2014 – 2015)

Fintech. Experience in leading, executing projects and capital raising.

Research assistant; Zlotowski Center for Neuroscience (BGU) (2014 – 2015)

Research of algorithms to describe functional brain connectivity using fMRI image processing.

Signal processing and Control Engineer; Elbit Systems (2013 – 2014)

Student Position; Algorithms for processing signals received from Inertial Navigation Systems.

Military Service (2004 – 2009)

Combat officer positions up to company commander, the field intelligence corps. Rank: Major.

PUBLICATIONS

1. **Diverse Generation from a Single Video Made Possible**
   Haim, Feinstein, Granot, **Shocher**, Bagon, Dekel, Irani (2021 arXiv, 2022 Under review)

2. **Drop the GAN: In Defense of Patches Nearest Neighbors as Single Image Generative Models**
   Granot, **Shocher**, Feinstein, Bagon, Irani (CVPR 2022 Oral Presentation)

3. **Semantic Pyramid for Image Generation**
   Shocher, Gandelsman, Mosseri, Yarom, Irani, Freeman, Dekel (CVPR 2020 Oral Presentation)

4. **From Discrete to Continuous Convolution Layers**
   Shocher, Feinstein, Haim, Irani (2020 arXiv)

5. **KernelGAN: Blind Super-Resolution Kernel Estimation using an Internal-GAN**
   Bell-Kligler, **Shocher**, Irani (NeurIPS 2019 Oral Presentation)

6. **InGAN: Capturing and Retargeting the "DNA" of a Natural Image**
   Shocher, Bagon, Isola, Irani (ICCV 2019 Oral Presentation)

7. **Double-DIP: Unsupervised Image Decomposition via Coupled Deep-Image-Priors**
   Gandelsman, **Shocher**, Irani (CVPR 2019 Oral Presentation)

8. **Zero-Shot Super-Resolution using Deep Internal Learning**
   Shocher, Cohen, Irani (CVPR 2018)

9. **Evaluation of Functional Brain Connectivity Abnormalities via fMRI**
   Shocher, Kushinsky, Veksler, Friedman, Shallom (IEEEI 2014)

HONORS & AWARDS

- **Blavatnik Award for Outstanding CS Ph.D. (2022)**
- **Rothschild Postdoctoral Fellowship (2021)**
- **Fulbright Postdoctoral Fellowship (2021)**
- **John F. Kennedy Award for Outstanding Ph.D. (2021)**
- **Weizmann Institute of Science; Dean's award for outstanding M.Sc. (2018)**
- **Ben-Gurion University; Graduated B.Sc. with honors (2014)**
- **Ben-Gurion University; Best Student Project Award and Scholarship (2014)**