

Max Ehrlich

<https://maxehr.umiacs.io> | <https://scholar.google.com/citations?user=q-WSy3AAAAAJ>

ABOUT ● Research Assistant in the University of Maryland Institute for Advanced Computer Studies and Ph.D. candidate in the Computer Science department. My research studies the effect of multimedia compression on deep learning systems.

EDUCATION ● **PH.D. IN COMPUTER SCIENCE** 08/2017 - **PRESENT**
University of Maryland | College Park, MD
Advisors: Larry Davis, Abhinav Shrivastava
GPA: 4.0
Research Focus: Deep learning and multimedia compression

● **M.S. IN COMPUTER SCIENCE** 02/2014 - 08/2015
Stevens Institute of Technology | Hoboken, NJ
Advisor: Philippos Mordohai
GPA: 4.0
Thesis: Discriminative Hand Tracking From Depth Images

● **B.S. IN COMPUTER SCIENCE** 09/2007 - 05/2011
Rutgers University | New Brunswick, NJ
Minor: Mathematics
Dean's List: Fall 2009

EXPERIENCE ● **RESEARCH ASSISTANT** 08/2017 - **PRESENT**
University of Maryland Institute for Advanced Computer Studies | College Park, MD
Original research related to project grants from IARPA Core3D, DARPA Squad-X, and DARPA Medifor.

● **VISITING RESEARCH ENGINEER** 07/2020 - **PRESENT**
Facebook AI | New York, NY
Research in compression robustness and its applications to adversarial defense.

● **MACHINE LEARNING INTERN** 06/2019 - 08/2019
Adobe Research: Document Intelligence Lab | College Park, MD
Research in scanned document image restoration and denoising using deep CNN regression.

● **COMPUTER SCIENTIST** 07/2011 - 07/2017
SRI International Center for Vision Technologies | Princeton, NJ
Produced original research and publications in computer vision and machine learning domains. Designed and implemented algorithms to solve real-world computer vision problems.

● **INTERN** 06/2008 - 05/2011
Sarnoff Corporation | Princeton, NJ
Assisted with research and data collection/analysis for image processing systems including object tracking and fingerprinting, stereo imaging, classification, and segmentation. Created native user interfaces, web applications, and iPhone apps for released products.

● **INTERN**
Rutgers University WINLAB | New Brunswick, NJ
Big Data Visualization 05/2008 - 06/2008
Created graphical user interfaces to visualize large-scale network data.
Linux System Administration 05/2007 - 08/2007
Learned advanced Linux usage and maintained Linux servers to support lab research.

**PUBLICATIONS
&
PATENTS**

- **Max Ehrlich**, Larry Davis, Ser-Nam Lim, and Abhinav Shrivastava. “**Quantization Guided JPEG Artifact Correction.**” In *Proceedings of the European Conference on Computer Vision*, 2020.
- **Max Ehrlich**, and Larry Davis. “**Deep Residual Learning in the JPEG Transform Domain.**” In *Proceedings of the International Conference on Computer Vision*, 2019.
- Arthita Ghosh, **Max Ehrlich**, Larry Davis, and Rama Chellappa. “**Unsupervised Super-Resolution of Satellite Imagery for High Fidelity Material Label Transfer.**” In *IEEE International Geoscience and Remote Sensing Symposium*, 2019.
- Mohamed R Amer, Timothy J Shields, Amir Tamrakar, **Max Ehrlich**, and Timur Almaev. “**Deep Multi-Task Representation Learning.**” *US Patent Application 16/085,859*, 2019.
- Arthita Ghosh, **Max Ehrlich**, Sohil Shah, Larry Davis, and Rama Chellappa. “**Stacked U-Nets for Ground Material Segmentation in Remote Sensing Imagery.**” In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, 2018.
- Timothy J. Shields, Mohamed R. Amer, **Max Ehrlich**, Amir Tamrakar. “**Action-Affect-Gender Classification using Multi-Task Representation Learning.**” In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, 2017.
- **Max Ehrlich**, Timothy J. Shields, Timur Almaev, and Mohamed R. Amer. “**Facial attributes classification using multi-task representation learning.**” In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, 2016.
- **Max Ehrlich**, and Philippos Mordohai. “**Discriminative hand localization in depth images.**” In *Proceedings of the IEEE Symposium on 3D User Interfaces*, 2016
- **Max Ehrlich**. “**Discriminative Hand Tracking from Depth Images.**” *Master's Thesis, Stevens Institute of Technology*, 2015.