# Michael Iliadis


Contact Information

Michael Iliadis
Sr. Machine Learning Engineer
Vidado.ai

*Mobile:* +1-408-886-0912
miliad@u.northwestern.edu
http://miliadis.github.io/
github.com/miliadis


Research Interests

My research focuses in video compressive sensing for perceived quality video reconstruction and recognition. The methodologies and techniques I have applied include sparsity-seeking optimization and deep learning based models. In addition, I have delivered and continue to work on real-world problems such as semantic segmentation for video scene understanding and image retrieval.

Education

**Northwestern University,** Evanston, IL USA 09/2011 - 06/2016

Ph.D., Department of Electrical Engineering & Computer Science

- *Thesis*: Sparse Representation and Deep Learning for Image and Video Reconstruction
- *Advisor*: Aggelos K. Katsaggelos
- *Committee*: Aggelos K. Katsaggelos, Oliver Cossairt and Goce Trajcevski

**University of Bath,** Bath, UK 09/2008 - 09/2009

MSc, Department of Computer Science

- *Thesis*: Automatic Optimisation of Data Structures for Client-Server Computing
- *Advisor*: John Fitch

**University of Piraeus,** Piraeus, Greece 09/2003 - 06/2008

BSc, Department of Digital Systems

- *Thesis*: Discrete Event Modeling and Simulation of a Call Center
- *Advisor*: John Paravantis

Employment

**Vidado.ai,** Oakland, CA USA 08/2017 - Present

Sr. Machine Learning Engineer, Machine Learning Team
- Researching a large-scale image classification system using one-shot learning
- Researched a robust near-duplicate image retrieval system, which led to a patent
- Developed a system to detect tables in scanned forms using one-stage deep learning detector

**SONY US Research Center,** San Jose, CA USA 08/2016 - 08/2017

Research Scientist, Visual Sensing Technology
- Researched the semantic segmentation problem for Sony mobility products
- Designed a novel end-to-end FCN-CRF network for boundary refinement
- Improved semantic segmentation runtime by applying knowledge distillation loss

**TCL Research America,** San Jose, CA USA 06/2014 - 09/2014

Research Intern, Multimedia Lab, Dr. Haohong Wang
- Researched and implemented a novel sparsity method for face recognition
- Published 1 journal paper and 3 patents

**TCL Research America,** San Jose, CA USA 06/2013 - 09/2013

Research Intern, Multimedia Lab, Dr. Haohong Wang
- Designed compact features for a fast video retrieval system
- Published 1 conference paper and 1 patent

## Teaching Experience

**Northwestern University**

TA of Ian D. Horswill, Data Structures and Data Management, Spring '15 and '16
TA of Michael Honig, Engineering Analysis I, Fall '15

## Selected Publications

Google scholar: scholar.google.com/citations?user=eitRqV0AAAAJ&hl=en

Alice Lucas, **Michael Iliadis**, Rafael Molina and Aggelos K. Katsaggelos. Using Deep Neural Networks for Inverse Problems in Imaging. *IEEE Signal Processing Magazine (SPM), January 2018.*

**Michael Iliadis**, Leonidas Spinoulas and Aggelos K. Katsaggelos. DeepBinaryMask: Learning a Binary Mask for Video Compressive Sensing. *Submitted to Journal.*

**Michael Iliadis**, Leonidas Spinoulas and Aggelos K. Katsaggelos. Deep Fully-Connected Networks for Video Compressive Sensing. *Elsevier Digital Signal Processing, January 2018.*

**Michael Iliadis**, Haohong Wang, Rafael Molina and Aggelos K. Katsaggelos. Robust and Low-Rank Representation for Fast Face Identification with Occlusions. *IEEE Transactions on Image Processing (TIP), May 2017.*

**Michael Iliadis**, Leonidas Spinoulas, Albert S. Berahas, Haohong Wang and Aggelos K. Katsaggelos. Multi-Model Robust Error Correction for Face Recognition. *IEEE International Conference on Image Processing (ICIP)*, Phoenix, USA, September 2016.

**Michael Iliadis**, Jeremy Watt, Leonidas Spinoulas and Aggelos K. Katsaggelos. Video Compressive Sensing using Multiple Measurement Vectors. *IEEE International Conference on Image Processing (ICIP)*, Melbourne, Australia, September 2013. **Top 10% Paper Recognition**

## Selected Patents

**Michael Iliadis**, Haohong Wang. Face Recognition System and Method. *TCL Research America*, US Patent 9430694. August 2016.

**Michael Iliadis**, Armin Kappeler, Haohong Wang. Method and System for Face Recognition using Deep Collaborative Representation-Based Classification. *TCL Research America*, US Patent 9430697. August 2016.

**Michael Iliadis**, Haohong Wang. System and Method for Rapid Face Recognition. *TCL Research America*, US Patent 9275309. March 2016.

## Computer Skills

- Programming Languages: Python, C++, Java, Matlab
- Machine Learning/Computer Vision: PyTorch, Caffe, Torch, OpenCV

## Professional Service

**Reviewer**: TMM, TIP, ICME

## Language Skills

Greek (native), English (fluent).