Michael Iliadis

Contact Information

Michael Iliadis
Sr. Machine Learning Engineer
Vidado.ai

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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).