

# STANLEY M BILESCHI

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## EDUCATION:

### **Massachusetts Institute of Technology**

Ph.D. in Computer Science, May 2006

Dissertation: *StreetScenes: Towards Scene Understanding in Still Images*

Advisor: Tomaso Poggio

Master of Engineering in Electrical Engineering and Computer Science, January 2003

Thesis: *Advances in Component Based Face Detection*

### **State University of New York at Buffalo**

Bachelor of Science in Computer Science, May 2000

Bachelor of Engineering in Electrical Engineering, May 2000

Summa Cum Laude

## DOCTORAL DISSERTATION:

S. Bileschi. *StreetScenes: Towards Scene Understanding in Still Images*. MIT

Doctoral Thesis. 2006

## SELECTED PUBLICATIONS:

S. Bileschi. *Fully Automatic Calibration of LIDAR and Video Streams From a Vehicle*.

3-D Digital Imaging and Modeling (3DIM ICCV Workshop) 2009.

S. Bileschi. *Object Detection at Multiple Scales Improves Accuracy*. 19th IAPR  
International Conference on Pattern Recognition (ICPR) 2008.

T. Serre, L. Wolf, S. Bileschi, and T. Poggio. *Robust Object Recognition with Cortex-like  
Mechanisms*. IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI) 2007.

S. Bileschi and L. Wolf. *Image Representations Beyond Histograms of Orientations: The Role  
of Gestalt Descriptors*. IEEE Conference on Computer Vision and Pattern Recognition  
(CVPR) 2007.

S. Bileschi and L. Wolf. *A Unified System for Object Detection, Texture Recognition, and  
Context Analysis Based on the Standard Model Feature Set*. British Machine Vision  
Conference (BMVC) 2005.

S. Bileschi and L. Wolf. *A Critical View of Context*. International Journal of Computer Vision  
(IJCV) 2005.

S. Bileschi and B. Heisele. *Advances in Component Based Face Detection*. IEEE  
International Workshop on Analysis and Modeling of Faces and Gestures (AMFG) 2003.

## PATENT:

**7606777 High-performance vision system exploiting key features of visual cortex**

**PROFESSIONAL  
EXPERIENCE:**

***BILESCHI INTELLIGENCE SERVICES [2007-2010] Sole Proprietor:***

Started and managed small AI computing consulting company, formed in January 2007 and my full time job until I joined the start-up *DataXu* full time. Clients included start-ups as well as large established firms. Work was varied but focused on C and MATLAB software prototypes for machine learning and computer vision.

***DATAXU [2010-Current] Senior Analytics and Software Engineer:*** Responsible for exploring and implementing algorithms to learn intelligent bidding behavior in a real-time display ad market. Challenges include optimizing against variable customer constraints while continuously learning from billions of samples. Main daily technologies include Hadoop, Java, and Python.

**SELECTED  
CONSULTING  
PROJECTS:**

***BAE SYSTEMS:***

**Project:** Research and development of image processing techniques to detect specific objects, such as road markings and terrain types from aerial LIDAR and optical imagery.

***LOCKHEED MARTIN:***

**Project:** Led a small team involved in development of object recognition technology for categorization of lidar imagery from ground based urban data captures.

***SCANSCOUT.COM:***

**Project:** Design of scalable techniques to automatically organize user-generated video content into semantically meaningful groups based on video imagery alone.

***VISTACON TECHNOLOGIES:***

**Project:** Development of code for speed-critical circuit for long range object detection system

***EVRYX.COM:***

**Project:** Investigation into intellectual property issues and development of technology for detection of 2D objects in cell-phone photographs.

***AFFINE SYSTEMS:***

**Project:** Implementation of scalable face recognition software package in C and OpenCV.

***DATAXU:***

**Project:** Tailoring of machine learning techniques to big-data real time ad-auction.

**CODE PORTFOLIO:** <https://github.com/bileschi/>

**ACADEMIC  
HONORS:**

**National Science Foundation Fellow - 2000**

Awarded to approximately 1000 outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based master and doctoral degrees.

**University at Buffalo Honors Program 1996-2000**

Awarded by SUNY Buffalo to select students to provide undergraduate research, internship, and scholarship opportunities.

**TEACHING  
EXPERIENCE:**

*Massachusetts Institute of Technology, Cambridge, MA*

**Teaching Assistant**, Spring 2005

- Worked under MIT Prof. Polina Golland
- Taught *Representation and Modeling for Image Analysis* for the advanced degree program
- Instructed students on the skills necessary to dissect modern research publications regarding object recognition and image analysis.

*DataXu, Boston, MA*

**Senior Analytics and Software Engineer**, 2009 – Current

- Responsibilities included quarterly lectures on relevant technologies and techniques
- Lectures included stream learning, large-data statistical approximation techniques, machine learning theory / application.
- Online lecture materials available on request

**REFERENCES:**

Dr. Tomaso Poggio

Eugene McDermott Professor in the Brain Sciences and Human Behavior

Massachusetts Institute of Technology

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617-253-5230

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Dr. Tommi Jaakkola

Professor of Electrical Engineering and Computer Science

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Dr. Willard Simmons

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