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Mostafa Saad Ibrahim

Research Interests Interested in all aspects of **Computer Vision**, in particular: Object Detection and Recognition, Semantic Segmentation, Large-Scale Content-based Image Retrieval.

Education

2011-2012

- **Master Studies** in Computer Science in Faculty of Computers and Information - Cairo University.
- **Thesis title:** "Novel Technique for Object Localization in Natural Scenes"

2009

- **Pre-Master** studies, Faculty of Computers and Information - Cairo University (2009).

2004-2008

- **B.Sc.** in Computer Science, Faculty of Computers and Information - Cairo University.
- **Major:** Computer Science / **Minor:** Information Systems. **GPA 3.83 / 4**

Teaching

Teaching assistant, Sep 2008 – Present, Faculty of Computers and Information

Taught Courses

- Neural Network, Genetics Programming, Data Structures and Algorithms
- Programming, Programming Concepts, Software Engineering I, II
- Programming Competitions Training in Advanced Data Structures and Algorithms

Research Experience

Msc Student, April 2011 - Dec 2012, Cairo University– Egypt

Object Detection in Natural Scenes

- Under supervision of Dr Amr Badr, Investigated a novel technique to find Objects of interest (e.g. cars, cows, humans..etc) quickly in natural scenes. Experiments are conducted on VOC 2007 dataset. Core Idea was utilizing Image' superpixels to filter sub-windows.

Research Assistant, Jun 2010 – March 2011, Cairo Microsoft Innovation Center – Egypt

Semantic Image Segmentation

- **Project Overview:** Under supervision of Dr Motaz El Saban, I worked on Image Segmentation problem. We used conditional random fields to represent pixels in a Discrete Energy Function. We investigated:
 - Plugging superpixel neighborhood in the energy function
 - Unary and pairwise potentials in the energy function.

Premaster projects, July 2009

3D UML Tool

- **Research Project Overview:** Under supervision of Dr Amr Kamel, we worked over 2D UML diagrams limits in representing some elements in SWE diagrams (E.g. threads). To overcome limitation we Applied 3D UML and developed a tool as proof of concept.

Research Publications

- Mostafa S. Ibrahim, Amr A. Badr, Mostafa R. Abdallah and Ibrahim F. Eissa. *Bounding Box Object Localization Based On Image Superpixelization*, in **Procedia CS 13**.
- Mostafa S. Ibrahim and Motaz A. El Saban. *Higher order potentials with superpixel neighbourhood (hsn) for semantic image segmentation*, in **ICIP 2011**.

Software Development Experience

C++ Software Engineer, July 2011– Present, NTP– Egypt

NTP QFS Software: software that can help you in:

- Control the explosion of file data and the accompanying costs.
- Manage file data use across the enterprise, even across multiple platforms and storage types.
- Get your end users on board- without them, it's impossible to control file data use.

Java Software Engineer, Nov 2008 – May 2010, FAWRY – Egypt

Fawry EBPP – Fawry Banking Services

- **Project Overview:** Fawry is an electronic bill presentment and payment (EBPP) network that enables the Egyptian public to conveniently and securely pay their bills through the various electronic channels available at banks; including ATMs, the internet, and mobile phones.

Others

Awards /Achievements

- Chief Judge in both Egypt and Jordan National ACM Programming Contest in 2012
- Qualified to ACM ICPC World Finals 2011 in Orlando, Florida - USA.
- 2nd rank 2009 and 2nd rank 2010 in Arab Collegiate Programming Contest.
- 2nd rank 2006, 5th rank 2008 and 1st rank 2009 in Egypt National ACM Programming Contest.
- 8th rank in 2005 Egypt Olympiad in Informatics (EOI), *Silver Medal*.

Activities

- Attended *3rd INNS Winter Conference* 2012.
- Attended *International Conference In Image Processing* (ICIP) 2011
- Have been Organizing & Conducting *Computer Vision Study Group* in Cairo University
- Shared in organizing “*Machine Learning Launch*” in Cairo University, in 2011.
- Active member in *Machine Learning Study group*
- Sharing as contestant, coach, judge and chief judge in Programming Competitions Since 2005
- Have a YouTube Channel for describing **Algorithms in Arabic** for contestants
 - <http://www.youtube.com/user/nobody123497?feature=mhee>

Personal Details

- **Nationality:** Egyptian
- **Birth Date:** 16th of August, 1987
- **Language:** Arabic (Native), English (Very Good).
- **Marital Status:** Married
- **Military Status :** Exempted.