

Marwan Osman

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Professional Objective

To make a contribution in progressing computers intelligence through creating and building smart intelligent web and mobile applications.

Searching and looking to bring the latest state of the art from academia, to design and build smarter intelligent and useful products.

Education

MSc., Computer Vision Jun (2015)

University of Burgundy, France Grade: Mention Tres Bien

Thesis title: Visual Servoing Using The Trifocal Tensor

Abstract: An approach to incorporate the trifocal tensor estimated from the calibrated three-view geometry into the visual servoing control loop task is proposed. This approach presents a generalized 6-DOF visual servoing task, with the control loop being closed over projective measures, namely the trifocal tensor coefficients. To the best of our knowledge, this approach is the first to propose a fully analytical design for a 6-DOF visual servoing task based on the trifocal tensor.

BSc., Computer and Systems Engineering Jul (2010)

University of Alexandria, Egypt CGPA: 3.18

Graduation project title: WNMI: Web Networks and Mail Integrator

Abstract: A web framework integrating various social networks and mail providers, providing extensibility to any new coming network. WNMI is implemented in a web interface and a desktop interface featuring offline synchronization. The main concept of the project is to adhere with the rapid pace of emerging social networks and combine all the user's social streams in on user-friendly interface.

Experience

Research Intern

INRIA

Feb (2015) - Jun (2015)

Rennes, France

Deriving a generalized analytical 6-DOF Visual Servoing task, with the control loop being closed over projective measures, namely the trifocal tensor estimated from the calibrated three-view geometry.

Technologies used: C++, ViSP

Research Intern

Vecteo SAS

Jun (2014) - Aug (2014)

Le Creusot, France

Implementation and test of an analytical solution to inverse kinematic problem for 6-DOF robot manipulator.

Detection of disconnection in graphs, searching a solution for motion planning and definition of a new strategy ensuring the convergence of the algorithm.

Technologies used: C++

Senior Software Engineer

Splinter.Me

Mar (2013) - Aug (2013)

Alexandria, Egypt

splinter.me is a new social recruiting platform built on top of automatic data integration from multiple social networks to facilitate the recruiting process for both job-seekers and recruiters.

Technologies used: Ruby on Rails, Javascript, Neo4J Database, MongoDB

Last updated Jul 29, 2015

Junior Web Developer**eSpace Technologies**
Alexandria, Egypt

Jul (2010) - Mar (2013)

Developing cutting edge social applications with the Ruby on Rails stack.

Project *Marginize*, <http://www.marginize.com> August 2010 - May 2011

A social tool that adds a margin to any public webpage, enabling users to interact on top of it, checking in, adding comments and reading discussions about it pulled from social networks.

Project *Nextly*, <http://nextly.com> May 2011 - March 2013

A social streams browser that enhances the user experience browsing twitter, facebook and rss feeds, in a more modern way that is fast, efficient and user-friendly.

Participating in company's hack days, implementing ideas such as: 'The Industrial-Strength Audio Search Algorithm' empowering Shazam, an Android Time tracker app, a javascript tool to easily create guided tours for web applications.

Presenting Technical sessions for colleagues: 'Edge Rank Algorithm' used to populate the Facebook news feed feature, and 'Bloom Filters' and how they can be used to implement a trending topics algorithms like on Twitter.

Technologies used: Ruby on Rails, Javascript, MySQL

Software Quality Engineer - Intern**ITWorx**

Jul (2009) - Aug (2009)

Alexandria, Egypt

Worked on software testing automation on one of ITWorx products called I-Sales, using IBM Rational Functional Tester and writing test scripts in Java.

Presented an introduction session to the basics of Java language to some of my team members.

Contributed in defining a framework for future automation projects based on an object oriented framework for IBM RFT proposed by IBM.

Technologies used: Java, IBM RFT

Skills

- **Software Design:** Object Oriented Programming, Design Patterns, Agile Programming.
- **Programming Languages:** Java, C/C++, Basic, 8086 Assembly, Python, Ruby.
- **Scientific:** OpenCV, Matlab, ViSP, ROS.
- **Web Development:** HTML, CSS, JavaScript, JavaFX, Ruby on Rails.
- **DBMS:** Microsoft Access, MySQL, SQLite, Oracle 10g, MongoDB, Neo4J.
- **Platforms:** Windows 95/98/2000/XP/Vista/7, GNU/Linux Ubuntu, GNU/Linux ArchLinux.
- **Mobile Platforms:** Symbian, J2ME, Android.
- **IDEs:** Eclipse, Microsoft Visual Studio.NET, NetBeans, Vim.
- **Digital Design:** VHDL, Xilinx, ModelSim.
- **Design and Graphics Software (Fair knowledge):** Adobe Photoshop, 3D Studio Max, Adobe Premiere, Adobe Macromedia Flash, Gimp.

Extra Curricular Activities

- Enrolling in Coursera and Udacity online courses: AI, Machine Learning, Programming a Robotic Car, Computer Vision Fundamentals, Heterogenous Parallel Programming.
- Implemented a Vim plugin to reload your browser automatically on file save using xdotools on Gnome Linux. (*March, 2012*) Github repo

- Presented a 101 session for Information Technology Institute (ITI) about **Python and Google App Engine** (*May, 2011*)
- Participated in **Startup Weekend Cairo 2011**, Project **Jayyim** (*April, 2011*)
A real-time guitar amp and effects modeling mobile application for Android.
- Participated in organization of **Software Freedom Day@Alexandria University** festival (*September, 2009*)
Supervised a study group about Python.
Presented a session about "Programming under Linux in Python".
- Participated in **Microsoft Imagine Cup booth in the Faculty of Engineering, Alexandria University** (*November, 2008*)
- Attended **IEEE-ASST 3rd annual event "Leading your career, Leading your society"**, and associated workshop "Effective Time Management" (*September, 2007*)
- Attended **Algorithms and programming training for EOI** (*June - September, 2007*)
Topics: Graphs structure and algorithms, Backtracking, Geometric Algorithms, Binary Search Trees, Heaps, Dynamic Programming.

References

Available upon request.