Islam Elnabarawy

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Objective

Seeking a research and development position in the field of machine learning and computational intelligence.

Education

PhD in Computer Science   Fall 2014–Present
Missouri University of Science and Technology   Current GPA: 3.81/4.0
Advisor: Prof. Donald C. Wunsch II   Expected graduation: May, 2019

Master of Science in Computer Science   July 2013
The American University in Cairo, New Cairo, Egypt   GPA: 3.96/4.0
Thesis: Advanced Learning Methods and Regularization
       Applied to a High Order Neural Network
Advisor: Prof. Ashraf Abdelbar

Bachelor of Science in Computer Science   May 2007
Helwan University, Cairo, Egypt   Grade: Excellent with Honors
Senior Project: Hardware-Based Face Recognition using FPGA   (cumulative, equivalent to A)
Senior Project Grade: Excellent (equivalent to A)

Industry Experience

Machine Learning Engineer–Intern   GoGetter, Inc.   May 2018–August 2018
                                        https://gogetter.co   Full-time

- Investigate state of the art computational intelligence research.
- Design, prototype, and implement machine learning solutions to meet business and user needs.

Data Scientist–Intern   Magellan Healthcare Services May 2017–August 2017
                                        Maryland Heights, Missouri, USA Full-time

- Research solutions to data science problems in healthcare industry.
- Build and train machine learning models based on researched solutions.
- Develop and deploy user-friendly interfaces for internal customers to use trained models.

Senior Software Engineer   Omnivoyance Software Services November 2011–July 2012
                                        Cairo, Egypt   Full-time

- Web development using ASP.NET, Javascript, CSS3, and HTML5.
- Business logic development using .NET 4.0 and WCF services.
- Database development and administration using Microsoft SQL Server 2008 R2.

Senior Software Engineer   ConnectmeTV   December 2009–March 2011
                                        Cairo, Egypt   Full-time

- Design and development of software modules and components for an embedded system.
- Writing real-time code for a Linux-based home entertainment system.
- Developing a web-based system using Python and the Django MVC framework.
- Writing scripts to automate various tasks within the Linux environment.

Solution Developer   Link Development (LINKdev)   July 2007–November 2009
                                        Cairo, Egypt   Full-time

- Design and develop web-based solutions using ASP.NET and Microsoft SQL Server.
- Worked on the development of a large e-commerce portal using Microsoft Office Sharepoint
  Server and Microsoft Commerce Server.

Research Experience

   Research Assistant, Missouri University of Science and Technology (September 2014–Present)
   Research Assistant, The American University in Cairo (February 2014–August 2014)
   Research Assistant, The American University in Cairo (April 2011–May 2012)

Teaching Experience

   Instructor, Missouri University of Science and Technology (Fall 2015, Spring 2016, Fall 2016)
      Courses: Introduction to C++, Tools for Computer Scientists and Engineers (Lab)
   Teaching Assistant, The American University in Cairo (Winter 2014)
      Course: Advanced Data Mining (graduate level)
   Teaching Assistant, The American University in Cairo (Fall 2010–Summer 2013)
      Courses: Computer Organization and Assembly Language Programming, Computer Architecture, Artificial Intelligence, Compiler Design, Programming in Java, Computational Intelligence, Embedded Systems, Data Mining, Introduction to Computer Programming

Technical Skills

Programming Languages:	Python, Matlab, C/C++, C#, Java, PHP
Scripting Languages:	Bash, Javascript, Coffeescript
Scientific Computing:	Tensorflow, Scikit Learn, SciPy Stack, DEAP, OpenAI, Weka
Source Control:	Git, Mercurial, Subversion, Team Foundation Server
Operating Systems:	Windows, Linux, Embedded Linux
Computing Platforms:	Docker, Amazon AWS, Google Cloud Services, HPC Clusters
Database Systems:	SQL Server, MySQL, MongoDB, Cassandra, SQLite, Redis
Web Development:	HTML5, CSS3
Web Frameworks:	ASP.NET, Wordpress, Symfony, Yii, CakePHP, Django
Javascript Libraries:	jQuery, NodeJS
Game Development:	Unity3d, Ogre3D, DirectX

Publications

   Book Chapters:

   Ashraf M. Abdelbar, Islam El-Nabarawy, Donald C. Wunch, and Khalid M. Salama, "**Ant colony optimization applied to the training of a high order neural network with adaptable exponential weights,**"Applied Artificial Higher Order Neural Networks for Control and Recognition. IGI Global Press, pp. 362374, 2016.

   Journal Papers:

   Islam Elnabarawy, Wei Jiang, and Donald C. Wunsch II, "**Survey of Privacy-Preserving Collaborative Filtering,**"IEEE Transactions on Emerging Topics in Computational Intelligence, submitted, 2018.

   Leonardo Enzo Brito da Silva, Islam Elnabarawy, and Donald C. Wunsch II, "**Dual Vigilance Fuzzy Adaptive Resonance Theory,**"Neural Networks, submitted, 2018.

   Leonardo Enzo Brito da Silva, Islam Elnabarawy, and Donald C. Wunsch II, "**Distributed Dual Vigilance Fuzzy Adaptive Resonance Theory,**"IEEE Transactions on Neural Networks and Learning Systems, submitted, 2018.

   Islam El-Nabarawy, Ashraf M. Abdelbar, "**Advanced Learning Methods and Exponent Regularization Applied to a High Order Neural Network,**"Neural Computing & Applications, 2014, 10.1007/s00521-014-1563-7.

   Conference Papers:

   Ashraf M. Abdelbar, Islam Elnabaraway, Khalid M. Salama, and Donald C. Wunsch II, "**Matrix Factorization Based Collaborative Filtering with Resilient Stochastic Gradient Descent,**"2018 IEEE Joint Conference on Neural Networks (IJCNN), Rio de Janero, Brazil, 2018, accepted.

   Ayah Helal, Enas Jawdat, Islam Elnabaraway, Ashraf Abdelbar, and Donald C. Wunsch, "**Integrated Particle Swarm and Evolutionary Algorithm Approaches to the Quadratic Assignment Problem,**"2017 IEEE Symposium Series on Computational Intelligence (SSCI), Honolulu, HI, 2017, pp. 1-5.

Islam Elnabarawy, Daniel R. Tauritz, and Donald C. Wunsch, "**Evolutionary Computation for the Automated Design of Category Functions for Fuzzy ART: An Initial Exploration,**" In Proceedings of GECCO 17 Companion, Berlin, Germany, July 15-19, 2017, 8 pages.

Islam Elnabarawy, Donald C. Wunsch and Ashraf M. Abdelbar, "**Biclustering ARTMAP collaborative filtering recommender system,**" 2016 International Joint Conference on Neural Networks (IJCNN), Vancouver, BC, 2016, pp. 2986-2991, 10.1109/IJCNN.2016.7727578

Islam El-Nabarawy, Ashraf M. Abdelbar and Donald C. Wunsch, "**Levenberg-Marquardt and Conjugate Gradient Methods Applied to a High Order Neural Network,**" The 2013 International Joint Conference on Neural Networks (IJCNN2013), pp. 1-7.

Other Publications:

Islam El-Nabarawy, "**Advanced Learning Methods and Regularization Applied to a High Order Neural Network,**" M.S. thesis, Department of Computer Science and Engineering, The American University in Cairo, New Cairo, Egypt, 2013.

Honors and Awards

ISC Graduate Research Poster Award, Missouri University of Science and Technology (October 2017)
ISC Graduate Research Symposium Award, Missouri University of Science and Technology (May 2015)
Graduate Honors Award, The American University in Cairo (Spring 2012)
Graduate Merit Fellowship, The American University in Cairo (Fall 2011–Spring 2012)
University Fellowship, The American University in Cairo (Fall 2010–Spring 2011)

Organizations and Service Activities

Missouri University of Science and Technology

Robotics Competition Team Member - Computing Division	Fall 2014–Spring 2017
Rolla Aikido Club President	Fall 2015–Spring 2017

The American University in Cairo

Spring 2010 Graduate Orientation Leader	Spring 2010

Helwan University

Students United member, Development Branch	Spring 2004–Winter 2006
Unofficial Department Discussion Group Owner and Moderator	Fall 2003–Fall 2006
Unofficial Department Website Webmaster and Forum Admin	Fall 2005–Fall 2006
Extracurricular Study Group Instructor (C++, DirectX 9)	Summer 2006

Professional Organizations

IEEE Student Member	2007–Present
ACM Professional Member	2009–Present
International Neural Network Society (INNS) Member	2013–Present
IEEE Computational Intelligence Society (IEEE-CIS) Member	2014–Present
IEEE-CIS Student Activities Subcommittee Member	2014–2015
IEEE-CIS Student Activities Subcommittee Vice Chair	2015–2016