Deyaaeldeen Almahallawi

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Education

- **Ph.D. in Computer Science, Indiana University, Bloomington, IN** *Fall 2013 - Present*
- **B.Sc. in Computer Science, Helwan University, Cairo, Egypt** *Class of 2011*
  - *Thesis: "Secure Framework for Distributed Privacy-Preserving Machine Learning Using Differential Privacy and fully Homomorphic Cryptosystem"*

Research Experience

- **Research Assistant, Indiana University, Bloomington, IN** *2013 - 2014*
  - Working on a language for distributed reversible computing that provides dynamic channel creation and treats "speculation" as first class construct.

Teaching Experience

- **Indiana University, Bloomington, IN**
  - *Associate Instructor, CSCI-C211: Introduction to Computer Science* *Fall 2014*

Employment History

- **R&D Engineer, MESC for Research and Development, Cairo, Egypt** *2011 - 2013*
  - Implemented experimental machine learning and image processing algorithms in C++ and MATLAB for LibCAD, a hardware-agnostic system for detecting breast cancer in mammograms.
- **Software Engineer Intern, Nile University, Cairo, Egypt** *Summer 2009, 2010*
  - Developed the NU bioinformatics cloud service using Javascript, jQuery, Java EE, and Python.

Skills

- Programming Languages: Haskell, Agda, Coq, Scheme, C++11, Python, Javascript, X86-64, MATLAB
- Tools: gcc, valgrind, make, gdb, ghc, emacs, git
- Operating Systems: GNU/Linux (Arch Linux user and familiar with many of Linux kernel-user-space API)

Relevant Graduate Coursework

- *Programming Languages Semantics*
  - Built an interpreter for an extension of LambdaPi language that supports pattern matching for dependent datatypes in Haskell
- *Compiler Construction and Optimization*
  - Built optimizing Compiler from a subset of Scheme R6RS to x86_64 in Scheme
- *Computer Networks*
  - Built a full bittorrent client and a port scanner in C++11

- *Software Specification and Verification*
  - Did many proofs of programs correctness

Schools and Workshops attended

- Oregon Programming Languages Summer School *Summer 2014*
- ACM SIGPLAN Programming Languages Mentoring Workshop *Winter 2014*
- Joint Summer Schools on Cryptography and Principles of Software Security *Summer 2012*

Awards and Honors

- NSF grant to attend Oregon Programming Languages Summer School *2014*
- ACM SIGPLAN Programming Languages Mentoring Workshop Scholarship *2014*
- Honor roll of top students at Faculty of Computers and Information, Helwan University *2008*
- Scholarship from Faculty of Computers and Information, Helwan University *2007-2011*

Professional Service

- Judge for Research Poster Symposium of Spring 2014 Undergraduate Research Opportunities in Computing- School of Informatics and Computing, Indiana University Bloomington.

Posters

- “Secure Framework for Distributed Privacy-Preserving Machine Learning Using Differential Privacy and fully Homomorphic Cryptosystem”. In Joint Summer Schools on Cryptography and Principles of Software Security, Pennsylvania State University, University Park, PA, USA, 2012.