Ayodeji Remi-Omosowon

Education

2016 **PhD. Computer Science**, *Nottingham Trent University*, Nottingham.
Applying Computational Intelligence to NP-Complete Problems in a Warehouse Environment

2011 **MSc. Computer Science**, *Nottingham Trent University*, Nottingham, *Distinction*.
Best MSc project; International Student Scholarship.

2011 **Diploma in Professional Practice**, *Nottingham Trent University*, Nottingham.

2007 **Bachelor of Technology in Computer Science**, *Federal University of Technology*, Akure, Nigeria.

Experience

2011–present **Development Analyst**, *NSK Europe Ltd.*, Newark, UK.
* Integration of research results with existing enterprise systems (C#, Python, GTK#, ASP.NET, SQL Server, Unity3D). Computational optimisation of business processes. Transformation of CSV / Excel data using Python.
* Development and maintenance of new and existing software and labelling systems (C#, Python, VB.NET, WinForms, ASP.NET, VBA). Automated verification tests for database migrations in Python.

2010–2011 **Computer Science Placement Student**, *NSK Europe Ltd.*, Newark, UK.
Developed and maintained new and existing applications (mobile, web and desktop) using C#, VB.NET, Python, Perl, VBA; Enforced database and source control standards.

2009 **Software Developer**, *UKN Global*, Lagos, Nigeria.
Carrier grade telecommunication systems development in Erlang, C, Python, Scala and Java.

2009 **Junior Software Developer**, *Parkway Projects*, Lagos, Nigeria.
Financial application development in ASP.NET, C#.

2008 **Junior Software Developer**, *Multisoft Consulting*, Port-Harcourt, Nigeria.
H.R. software application development in ASP.NET, C#.

2006–2007 **Software Developer**, *Codefusion Solutions*, Akure, Nigeria.
Application development in Oracle Application Express, Delphi, Flash, Oracle Database 10g XE, Firebird.

2006 **Software Developer, System Administrator**, *Wizards Solutions*, Akure, Nigeria.
Developed SMS module for sending automated notifications (Delphi, PHP). Developed fingerprint identification system to eradicate salary fraud due to ghost workers in state government (VB6, Verifinger SDK, MySQL); and demoed it to the country's president. RHEL3 system admin.

Skills and Interests

Languages Python, C#, PHP, VB.NET, Java, Erlang, Scala, C, Delphi, VB6 *(Industry Experience)*
Python, C#, Haskell, R, Octave/MATLAB, C++ *(Research, Personal Use)*

Other Interests Machine Learning [My Solutions to Coursera ML Course Exercises] [ML Book], Functional Programming, Enterprise Applications.

remiomosowon@gmail.com • *remiomosowon.github.io*
BCS Professional Member (MBCS: 990292944).

Key Projects

Container Loading Optimisation

Description Hybrid algorithm devised to optimise a specific container loading process.

pyeasyga

Description A simple and easy-to-use implementation of a Genetic Algorithm library in Python.
Project Page http://pypi.python.org/pypi/pyeasyga
Docs http://pythonhosted.org/pyeasyga/

Awards

Best Paper Award, IEEE Conference (UKSim). Apr 2016.
(shared with 3 others from 60 papers)

Best Poster Prize (from 35), STAR Conference, NTU. *(May 2015)*

Best Paper Award, IEEE Conference (UKSim). Mar 2015.
(shared with 8 others from 98 papers)

Best MSc Project Prize, Nottingham Trent University. *(2011)*

Nottingham Trent University International Scholarship. *(2009/2010)*

Patent

Title Method of efficient stacking items and packing a box using simulation.
Details Inventor: Ayodeji Folayemi Remi-Omosowon. Publication number: GB2524952. Publication date: 14 Oct 2015 (IPO Journal 6595). Status: Pending.
Description Patent application for novel guided process of selecting, stacking, and packing items satisfying several specific practical constraints. Process can automate manual packing by humans, or automated packing by machines.

Publications

Hybridization and the Collaborative Combination of Algorithms (2014).

Collaborative combination of a problem-specific greedy algorithm, rectangle packing algorithm and two genetic algorithms to solve a practical problem in a real-world company. Involved algorithm implementations in Java and C# and cross-platform GUI development.

Deriving an Entropy Measure for 2D Container Layouts (2015).

Mathematical derivation of a measure of disorderliness for a container layout based on the principle of entropy in thermodynamics. Involved the use of edge weighted graphs, minimum spanning trees, PRNG (Mersenne Twister). Prototype in Python, implementation in C#.

Applying Gamification Principles to a Container Loading System in a Warehouse Environment (2016).

Gamification of existing business system to increase employee engagement and positively impact overall employee performance. Involved development of simulation/serious-game environment in Unity3D with C#.

An Entropy-guided Monte-Carlo search Approach for generating Optimal Container Loading Layouts. *(unpublished)*

A novel method of guiding a monte-carlo tree search enabling it to achieve good loading characteristics at very low computational cost.

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