Bonaventure Chidube MOLOKWU

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An active researcher in the domain of Artificial Intelligence (AI) focused on resolving link dynamics problems (such as breakup prediction, link prediction, link influence, etc.) in Social Network Analysis (SNA) via the discovery of effective as well as efficient Deep Neural Network (DNN) techniques and models. Also, I am a seasoned solutions and web/mobile developer with over 8 years of industry experience. A flexible, collaborative, and good multi-tasker who is self-motivated, committed, and target-driven. I can adapt swiftly to newer skills, and can manage time and other resources wisely without constant supervision.

EDUCATION

University of Windsor, Ontario, Canada   2017 - 2021
Ph.D. (Honors)   Cumulative GPA: 92.50%
School of Computer Science - Major in Artificial Intelligence

University of Nigeria, Enugu State, Nigeria   2014 - 2016
M.Sc. (Honors)   Cumulative GPA: 4.40/5.00
Department of Computer Science - Major in Software Engineering

University of Benin, Edo State, Nigeria   2006 - 2011
B.Sc. (Honors)   Grade: Second-Class Upper
Department of Computer Science

PROFESSIONAL DEVELOPMENT

University of Windsor, Ontario, Canada
Centre for Teaching and Learning
University Teaching Certificate (UTC) .... 2018 - 2021
Certificate - Instructional Skills Workshop (ISW) 2018

Brainbench Incorporated, Virginia, USA
Information Technology
Certified Internet Professional – Web Development (BCIP) 2011
Certified PHP: Hypertext Preprocessor 5 Programmer 2011
Certified C++ Programmer 2011
Certified HTML 4.0 Programmer 2011
Certified JavaScript-JQuery Programmer 2011

TECHNICAL & PROFESSIONAL STRENGTHS

Software & Tools:	TensorFlow Library, Scikit-learn Library, Keras Library, LaTex, Git Version Control, Apache Cordova Framework, MVC Development Framework, Microsoft Office Suite, Adobe Photoshop CS4 Suite.
Programming Languages:	Python, PHP 5+, Microsoft C#, Microsoft ASP.NET, C/C++, JQuery, JavaScript/JSON, SQL (MS-SQL/MySQL).
Markup Languages:	HTML 5, HTML 4, CSS 3, CSS 2, Bootstrap 3+.

ACADEMIC AWARDS & RECOGNITION

· 2021/2022 Vector Institute Postgraduate Affiliate Award.
· 2020 Best Paper Award at the 32nd International Conference on Scientific and Statistical Database Management (SSDBM) - "Node Classification and Link Prediction in Social Graphs using RLVECN".
· 2020 COVID-19 Rapid Research Funding Opportunity: CIHR Finance Grant Account Number (VR5 172669).

- 2019/2020 University of Windsor Community Scholarship for African Students.
- 2019/2020 Conference Travel Award (Doctoral): University of Windsor, Canada.
- 2018/2019 Research Assistantship (RA): Artificial Intelligence Research Laboratory, University of Windsor, Canada.
- 2017/2018/2019 Graduate Assistantship (GA): School of Computer Science, University of Windsor, Canada.
- 2017/2018 Research Assistantship (RA): WODD (Warehousing, Object-oriented, Data mining, and Database design) Laboratory, University of Windsor, Canada.
- 2019 Canadian Union of Public Employees (CUPE) local 4580 Students' Scholarship.
- 2018 Director's Honour Roll (recognition of academic excellence): School of Computer Science, University of Windsor, Canada.
- 2017 Academic Scholarship: School of Computer Science, University of Windsor, Canada.
- First position (computer programming contest), 2010: Nigerian Association of Computer Science Students (NACOSS) – South-South Zone (Team: University of Benin).
- Second position (software exhibition), 2010: University of Benin Science-Week Exhibition.
- Fourth position (software exhibition), 2010: Nigerian Association of Computer Science Students (NACOSS) – South-South Zone.

POSITIONS OF RESPONSIBILITY & SERVICE

ACM Transactions on Information Systems (ACM TOIS)   https://dl.acm.org/journal/tois
Research Reviewer   *February 2021 - Till Date*
- Critical review (assessment and evaluation) of assigned research submissions in the domains of Information Retrieval and Information Systems.
- Review criteria is based on, viz: Goals, Description, Evaluation, Importance, Related Work, Discussion, and Clarity.

Windsor University Faculty Association (WUFA)   University of Windsor, Ontario, Canada.
Member - WUFA's Ad-Hoc Racial Justice Committee   *November 2020 - Till Date*
- Finding solutions to issues bordering on racial justice, equity, and inclusion within the University of Windsor.
- Make recommendations regarding changes to WUFA's Constitution and Bylaws to accompany the new structure and reflect diversity in representation.

Computer Science Canada (CS-CAN) / Informatique Canada (Info-CAN)   Canada.
Finance Officer & Representative - Student and Postdoc Advisory Committee (SPAC) September 2020 - Till Date
- Foster and represent the community of Canadian Computer Science post-secondary students and postdoctoral fellows. Financial record keeping with regard to the activities of SPAC.

Vector Institute   https://vectorinstitute.ai/
Reviewer/Member - 2021 Vector Institute Scholarship Adjudication Committee   *April 2021*
- Assess and review scholarship applications/nominations into the Vector Institute Artificial Intelligence (AI) Master's programs at tertiary/post-secondary institutions in Ontario.

International Joint Conference on Artificial Intelligence (IJCAI)   Yokohama, Japan.
Student Volunteer   *January 2021*
- Hosting, managing, and controlling virtual Zoom meetings for the Tutorial sessions of IJCAI-PRICAI, 2020.

Institute of Electrical and Electronics Engineers (IEEE Windsor)   Windsor, Ontario, Canada.
Secretary - Windsor Section Joint Chapter, CIS11/SMC28   *January 2020 - December 2020*
- Management of information for decision making in the executive committee. Submit members' requests and needs to the executive committee. Accountability, maintenance, and ownership of Section's records and correspondence.

STEM Fellowship Big Data Challenge for High School Students   Toronto, Ontario, Canada.
Research Reviewer   *2019 - 2020*
- Review, assess, and evaluate selected research paper submissions based on the following criteria: Analysis & Techniques, Diversity & Data Representation, Results & Discussion, and Presentation & Report.

International Conference on Neural Information Processing (ICONIP)   Sydney, Australia.
Program Committee (PC) Member - Two-time Reviewer   *2019 - 2020*
- This is a rank 'A' conference based on CORE ranking standards. Primarily, my assignment is to review, assess, and evaluate selected research paper submissions for originality/novelty and worthiness based on the following benchmarks, viz: presentation, innovation, technical soundness, and research-content.

Académie Ste. Cécile International School　　925 Cousineau Road, Windsor, Ontario N9G 1V8, Canada.
Member - Panel of Judges　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*2018 - 2020*
· Evaluation, assessment, and judgement with respect to science projects exhibited by students ahead of the Ontario-wide competition.

African Women Association of Windsor (AWAW)　　　　　　　　　　　Windsor, Ontario, Canada.
Member - Organizing Committee　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*2017 - 2019*
· Planning and organizing of workshops for African youth in Windsor, Ontario, viz:
Workshop - "Keeping Them out of Trouble" (2017 and 2018);
Social Affair - "Mothers' Day Taste the Best of African Cuisines" (2017, 2018, 2019).

PROFESSIONAL EXPERIENCE

Sessional Instructor　　　　　　　　　　　　　　　　　　　　　　　January 2020 – Till Date
School of Computer Science – University of Windsor, 401 Sunset Avenue, Windsor, Ontario N9B 3P4, Canada.
· Teaching: Introduction to the Internet (COMP-2057) - Winter 2020
· Teaching: Social Media and Mobile Technology for End Users (COMP-2097) - Summer 2020
· Teaching: Introduction to the Internet (COMP-2057) - Winter 2021

Research Assistant　　　　　　　　　　　　　　　　　　　　　　　September 2017 – Till Date
Artificial Intelligence Laboratory (ERIE 3127) – 401 Sunset Avenue, Windsor, Ontario N9B 3P4, Canada.
· Research partnership with International Business Machines (IBM).
· Supervise undergraduate (Bachelor's degree) students working on selected research project(s).
· Co-supervise graduate (Master's degree) students working on neural-network related tasks or projects.
· Research and experiments with respect to open problems in Social Network Analysis using real world datasets.

Laboratory Instructor　　　　　　　　　　　　　　　　　　　September 2017 – December 2019
School of Computer Science – University of Windsor, 401 Sunset Avenue, Windsor, Ontario N9B 3P4, Canada.
· Instruct, guide, and assist students during practical (programming) sessions in the laboratory.
· Conduct and grade assignments and/or examinations for undergraduate students.

Senior Application Developer　　　　　　　　　　　　　　　　　June 2015 – September 2017
Head Office - SWIFT Networks Limited, 31 Saka Tinubu Street, Victoria Island, Lagos State, Nigeria.
· Design, development, implementation, customization, and support of web-based applications.
· System analysis and improvements.
· Working with vendors to resolve more advanced issues where and when necessary.
· Resolving escalated customer complaints.
· Implementation, testing, integration, monitoring, and support of Microsoft CRM/ERP and web applications.

Software Developer　　　　　　　　　　　　　　　　　　　　　　October 2014 – June 2015
Head Office - Vericore Technologies, 55E Adebisi Omotola Close, Victoria Island, Lagos State, Nigeria.
· Reviewing current systems and presenting ideas for system improvements.
· Working closely with analysts, designers, and staff.
· Producing detailed specifications and writing the program codes.
· Preparation of training manuals for users.
· Maintaining live (production) solutions/applications.
· Testing developed solutions in controlled environments (sandbox and staging) prior to deployment (live).

ICT Consultant (Contract Service)　　　　　　　　　　　　September 2011 – January 2013
Kogi State Agricultural Development Project, Off Abuja-Okene Highway, Lokoja, Kogi State, Nigeria.
· Design, development, implementation, and maintenance of an Electronic Database Management System (EDMS) for Kogi State Farmers' Census, 2011.
· Design and implementation of an Electronic Payroll System (EPS) for staff-remuneration management.
· Troubleshooting and maintenance of tower systems, desktop PCs, laptop PCs, etc.

ICT Tutor (Contract Service)　　　　　　　　　　　　　　　June 2011 – November 2011
Salem International Academy, Off Marine Road, Jakura Estate, Lokoja, Kogi State, Nigeria.
· Tutor: Computer Science; Information and Communications Technology (ICT).

RESEARCH PROJECTS

COVID-19 Rapid Research May 2020 – May 2021
Canadian Institutes of Health Research (CIHR) *Canada*

- Funding Reference Number (FRN): VR5 172669
- Assemble the empirical evidence required to inform the design of supply chain processes and infrastructure within and across provincial health systems to meet the significant demands of COVID-19, currently and in future phases.
- To ensure that a resilient and secure supply of products (e.g. Personal Protective Equipment) are available to health teams and Community Health Centres (CHCs) when and where they are needed to care for every Canadian citizen.

Anomaly Detection in Automobiles May 2021 – May 2026
Ford Motor Company (FMC), Natural Sciences and Engineering Research Council (NSERC) *Canada*

- Jointly funded and supported by the following: Ford Motor Company (FMC), Natural Sciences and Engineering Research Council (NSERC), and Level One Robotics and Controls
- Anomaly Detection in the engine blocks of automobiles.

RESEARCH ARTICLES & PUBLICATIONS

Research Articles

1. Event Prediction in Complex Social Graphs using One-Dimensional Convolutional Neural Network (28th International Joint Conference on Artificial Intelligence, IJCAI-2019).
2. Event Prediction in Social Graphs Using 1-Dimensional Convolutional Neural Network (32nd Canadian Conference on Artificial Intelligence, Canadian-AI 2019).
3. Event Prediction in Complex Social Graphs via Feature Learning of Vertex Embeddings (26th International Conference on Neural Information Processing of the Asia-Pacific Neural Network Society, ICONIP-2019).
4. Spatial Event Prediction via Multivariate Time Series Analysis of Neighboring Social Units using Deep Neural Networks (2019 International Joint Conference on Neural Network, IJCNN-2019).
5. Social Network Analysis using RLVECN: Representation Learning via Knowledge-Graph Embeddings and Convolutional Neural-Network (29th International Joint Conference on Artificial Intelligence, IJCAI-PRICAI 2020).
6. Node Classification in Complex Social Graphs via Knowledge-Graph Embeddings and Convolutional Neural Network (20th International Conference on Computational Science, ICCS-2020).
7. Node Classification and Link Prediction in Social Graphs using RLVECN (32nd International Conference on Scientific and Statistical Database Management, SSDBM-2020).
8. Simulating the Impact of Hospital Capacity and Social Isolation to Minimize the Propagation of Infectious Diseases (Proceedings of the 26th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, KDD-2020).
9. Link Prediction in Social Graphs using Representation Learning via Knowledge-Graph Embeddings and ConvNet (Proceedings of the 2020 IEEE International Conference on Systems, Man, and Cybernetics, SMC-2020).
10. Social Network Analysis using Knowledge-Graph Embeddings and Convolution Operations (Proceedings of the 25th International Conference on Pattern Recognition, ICPR-2020).

Publications

- scholar.google.com/citations?user=Bonaventure C. Molokwu
- semanticscholar.org/search?q=Bonaventure C. Molokwu

OTHER INFORMATION

Professional Memberships

- Institute of Electrical and Electronics Engineers (IEEE)
- Canadian Artificial Intelligence Association (CAIAC)
- International Association of Computer Science and Information Technology (IACSIT)

Languages: Fluent English (IELTS 7.5 Band Score), Igbo, and French.
Hobbies: Soccer, Chess, Draughts, and Woodwork.