



JAMILU AUWALU ADAMU, FIMC, FIMS (UK), FAIPA, FICA, CMC, TML

Modeling Engineer, Data Scientist & Advanced Artificial Neural Network Expert

I had 33 international scholarly published articles with Google Scholar Citations 121, h-index 4, i10-index 2 since 2018 while Researchgate.org had 99 Citations, 5,808 Reads since 2017.

Professional Summary

I am an accomplished professional specializing in AI, predictive analytics, and advanced technologies. As a partner with IBM, I leverage their cutting-edge innovations and the New Partner Accelerator program to revolutionize time series forecasting and collaborate on projects across AI, Hybrid Cloud, IT, Cybersecurity, Blockchain, and Quantum Computing. Additionally, my partnership with Toptal LLC involves executing projects in AI, Cloud, IT, Cybersecurity, Blockchain, Predictive Analytics, and Virtualization. Notably, I developed the TopneunetAI Models, boosting predictive accuracy from 7.2% to 99.9%, significantly benefiting climate action, economic, population, health finance, and investment sectors. My expertise has been recognized globally, evidenced by my nomination as a Scientific Expert by the IPCC Focal Point for Nigeria, contributing to the 2024 IPCC Special Report on Climate Change and Cities, in collaboration with the UN and WMO.

Headline:

- **IBM Business Partner:** I partner with IBM, a global innovation leader, to revolutionize time series forecasting through advanced technology and the New Partner Accelerator program. We collaborate on projects spanning *AI, Hybrid Cloud, IT, Cybersecurity, Blockchain, Quantum Computing, and more.*
- **Toptal LLC USA Partner:** With Toptal LLC, I execute projects in *AI, Cloud, IT, Cybersecurity, Blockchain, Predictive Analytics, and Virtualization.* A key achievement is the TopneunetAI Models, which enhance *predictive accuracy from 7.2% to 99.9%*, benefiting climate action, economic, population, health, finance, and investment sectors
- **IPCC Nomination:** I was **Nominated as a Scientific Expert** by the IPCC Focal Point for Nigeria (National Climate Change Council), I have been chosen to contribute to the *2024 Scoping Meeting* for the *IPCC Special Report on Climate Change and Cities.* This prestigious opportunity, organized by the *Intergovernmental Panel on Climate Change (IPCC)* in collaboration with the *United Nations (UN)* and the *World Meteorological Organization (WMO)*, underscores my role in advancing climate science on a global scale.

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Current Trends and Challenges in Deep Neural Network Predictive Analytics and Virtualization (2024 downward):

Google DeepMind's GraphCast, unveiled on November 14, 2023, redefines predictive analytics and virtualization by introducing an autoregressive model with Graph Neural Networks and a "multi-mesh" representation, achieving rapid and highly accurate 10-day weather forecasts. The model's success in severe event prediction surpasses traditional methods, incorporating unique GNNs with trial-and-error activation functions. However, challenges in the broader landscape of deep neural networks, including the selection of over 71 activation functions and a complex decision-making process, lead to psychological strain for AI professionals and raise concerns about bias and fairness in existing platforms like Keras, TensorFlow, and Neural Designer.

Key Achievements:

1. Revolutionary Large Numerical Models (LNMs) (October 2022):

- Introducing LNMs utilizing TopneunetAI Supercomputing ChartMAE-Zero combined with OpenAI ChartGPT for Predictive Data Analytics and Virtualization services.
- Pioneering method aiming to increase the domain of the best activation functions set from smaller to larger to achieve an **impressive numerical prediction accuracy of 99.9% leveraging Quantum computing technology of NVIDIA Supercomputing AI or IBM Quantum System.**

2. TopneunetAI Algorithm:

- Developed a revolutionary deep neural network algorithm for numerical predictive analytics and visualization.
- Addressed the activation function diversity dilemma, presenting a puzzle for achieving

optimal model performance with advanced activation functions.

- Proposed methods for guarding against biases and emphasized the dynamic adaptability imperative for model performance enhancement.

3. Cognitive Load of Activation Function Selection:

- Explored challenges faced by AI professionals in selecting activation functions, proposing a user-friendly method for decision-making support.

4. Sector-Specific Prediction Challenges:

- Recognized limitations of traditional predictive models, introducing an approach tailoring predictions to meet the nuanced requirements of different industries.

5. Revolutionizing Decision-Making Accessibility:

- Committed to making predictive analytics tools user-friendly and accessible, presenting a method to break down barriers for decision-makers across industries.

Academic and Professional Background:

- Published 33 international scholarly articles since 2018 with 121 Google Scholar Citations, h-index 6, i10-index 2.
- Served as the former associate editor of risk.net journals (London-2018), associate editor of the risk and financial management journal, and Editor, Journal of Economics and Management Sciences (JEMS) - California –USA, 2020 (Remote)
- Assistant Lecturer, College of Arts, Science and Remedial Studies (CAS), Nigeria-2009 (Permanent)

- Lecturer, University of Abuja, Nigerian Turkish Nile University (2012), Nigeria – Part-Time
- Founded White Horse Risk Management Consult Ltd in 2014, Nigeria.
- Founder, TopneunetAI (2022), Nigeria

Awards and Recognitions:

- Received a Certificate of Excellence in Peer Reviewing, India (2023).
- Honorary Doctorate and Kwume Nkurme Leadership Awards from the Africa Institute of Public Administration.
- Awarded for Career Excellence by the Guild of Online Journalists and See'd Ulm Islam prize for Best Graduating Student in Mathematics.
- Best Level I, II, and III Student in Pure Mathematics.

Educational Background:

- B.Sc in Pure Mathematics (Bayero University, 2006) - Upper Second Class, 4.09 on a scale of 5.00.
- M.Sc in Financial Mathematics (University of Abuja, 2011) - Above 4.00 on a scale of 5.00.

Professional Memberships:

- Fellow of the Institute of Management Consultant, Institute of Management Specialist (UK), African Institute of Public Administration.
- Certified Management Consultant, Transformational Leader.
- Former President of Academic Staff Union of Inter-University Centres (ASUIC) and National Coordinator of Credible Candidates (C2) with more than 500,000 members.

Current Position (Permanent):

- Currently serving as a Modeling Engineer, Data Scientist & Advanced Artificial Neural Network Expert at the National Mathematical Centre, FCT, Abuja-Nigeria.

- Founder, TopneunetAI

Skills:

Data Scientist, Non-linear Specific Activation Functions, Deep Artificial Neural Network, Elementary Python, C++, Fortran, Basic, Excel, Power Point, Power BI, etc.

Personal Interests:

- Autonomous AI, Robotics, Non-linear Specific Activation Functions, Advanced Deep Learning Artificial Neural Network, Supercomputing, Quantum Computing, AI Models Training, Cloud Computing and Security.
- I realized my greatest assets are imagination, creativity, logic and innovation
- Happily married with three kids.
- Enjoys meditation, exercise, light music, traveling, reading, and continuous learning.

Languages:

English and Hausa

Social Profiles and Publications:

- <https://www.linkedin.com/in/jamilu-adamu-fimc-fims-uk-faipa-fica-cmc-tml-215733a0/>
- <https://www.risk.net/author/jamilu-auwalu-adamu>
- <https://scholar.google.com/citations?user=UBeiJtIAAAJ&hl=en>
- <https://www.researchgate.net/profile/Jamilu-Adamu-3>
- <https://redfame.com/journal/index.php/ijsss/search/authors/view?firstName=Jamilu&middleName=Auwalu&lastName=Adamu&affiliation=National%20Mathematical%20Center%2C%20Abuja&country=NG>
- https://prmia.org/PRMIAInstitute/Shared_Content/Events/PRMIA_Event_Display.aspx?EventKey=8483&WebsiteKey=f9389091-d57e-4c66-bab5-ae97e8b96401
- <https://www.sciedupress.com/journal/index.php/mos/article/view/7991>

- <https://j.ideasspread.org/index.php/rfm/about/editorialTeam>

Referees:

1. **Professor Balarabe Yushau, Deputy Director of Research and Innovation, Abubakar Tafawa Balewa University, Bauchi State, Nigeria.**
2. **Haris Jaafar Bello, PhD – School of Mathematics Programme, National Mathematical Centre, FCT- Abuja, Nigeria.**
3. **Mr. Usoroh Boniface Dickson, Federal Ministry of Education FCT-Abuja, Nigeria**

• List of Some Published Articles

[1] Jamilu Auwalu Adamu (2019), Advanced Stochastic Optimization Algorithm for Deep Learning Artificial Neural Networks in Banking and Finance Industries, *Risk and Financial Management Journal, USA*, Vol 1 No1 (2019), DOI: <https://doi.org/10.30560/rfm.v1n1p8> and available online: <https://j.ideasspread.org/index.php/rfm/article/view/387>

[2] Jamilu Auwalu Adamu (2019), Superintelligent Deep Learning Artificial Neural Networks, **accepted** for publication in the *International Journal of Applied Science*, IDEAS SPREAD. INC, USA (<https://j.ideasspread.org/index.php/ijas>), preprint available on <https://www.preprints.org/manuscript/201912.0263/v1> with doi:10.20944/preprints201912.0263.v1

[3] Jamilu Auwalu Adamu (2019), Advanced Deterministic Optimization Algorithm for Deep Learning Artificial Neural Networks, **accepted** for publication in the *International Journal of Applied Science*, IDEAS SPREAD. INC, USA available on <https://j.ideasspread.org/index.php/ijas>

[4] Jamilu Auwalu Adamu (2019), Deterministic and Stochastic Superintelligent Digital Brains, Distinct Biological Neurons: Distinct Activation Functions implying Distinct Artificial Neurons, preprints available on **researchgate.net** and **academia.edu** respectively via

https://www.researchgate.net/publication/338170126_Deterministic_and_Stochastic_Superintelligent_Digital_Brains_Distinct_Biological_Neurons_Distinct_Activation_Functions_implicating_Distinct_Artificial_Neurons with DOI: 10.13140/RG.2.2.31550.23368 and

https://www.academia.edu/41430249/Deterministic_and_Stochastic_Superintelligent_Digital_Brain

[5] Jamilu Auwalu Adamu (2019), Backward Propagation of Artificial Neural Network: First Derivatives of Advanced Optimized Stochastic Activation Functions, preprints available on **researchgate.net** via https://www.researchgate.net/publication/337907110_Backward_Propagation_of_Artificial_Neural_Network_First_Derivatives_of_Advanced_Optimized_Stochastic_Activation_Functions , DOI: 10.13140/RG.2.2.14004.60803

[6] Jamilu Auwalu Adamu (2019), Superintelligent Deep Learning Artificial Neural Networks, accepted in the International Journal of Applied Science, IDEAS SPREAD.INC

[7] Jamilu Auwalu Adamu (2019), Advanced Deterministic Optimization Algorithm for Deep Learning Artificial Neural Networks, accepted in the International Journal of Applied Science, IDEAS SPREAD. INC

[8] Jamilu Auwalu Adamu (2018), IFRS 9 Measurement of Financial Instruments 2018: Jameel's Non-Normal Brownian Motion Models are Indeed IFRS 9 Complaint Models, *Journal of Economics and Management Sciences*, Vol 1 No 1 (2018), pp 92-113, , 2018, DOI: <https://doi.org/10.30560/jems.v1n1p92>.

[9] Jamilu Auwalu Adamu (2018), Jameel's Two and Three-Dimensional Stressed Closed Form Models are Indeed IFRS 9 Complaint Models, *Journal of*

Economics and Management Sciences, Vol 1 No 1 (2018), pp 175-191, , 2018, DOI: <https://doi.org/10.30560/jems.v1n1p175>.

[10] Jamilu Auwalu Adamu (2018), Jameel's Dimensional Stressed Default Probability Models are Indeed IFRS 9 Complaint Models, *Journal of Economics and Management Sciences*, Vol 1 No 2 (2018), pp: 104-114, 2018, DOI: <https://doi.org/10.30560/jems.v1n2p102>.

[11] Jamilu Auwalu Adamu (2017), Jameel's Criterion and Jameel's Advanced Stressed Models: An Ideas that Lead to Non-Normal Stocks Brownian Motion Models, *Noble International Journal of Business and Management Research*, Vol. 01, No. 10, pp: 136-154, 2017, URL: <http://napublisher.org/?ic=journals&id=2>.

[12] Jamilu Auwalu Adamu (2016), Reliable and Sophisticated Advanced Stressed Crises Compound Options Pricing Models, *Management and Organizational Studies*, Vol3, No 1 (2016), pp: 39-55, 2016, DOI: <https://doi.org/10.5430/mos.v3n1p39>.

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[14] Jamilu Auwalu Adamu (2017), An Introduction of Jameel's Advanced Stressed Economic and Financial Crises Models and to Dramatically Increasing Markets Confidence and Drastically Decreasing Markets Risks, *International Journal of Social Science Studies* , Vol 4, No 3 (2016), pp: 39-71,

DOI: <https://doi.org/10.11114/ijsss.v4i3.1326>

[15] Jamilu Auwalu Adamu (2015), Banking and Economic Advanced Stressed Probability of Default Models, *Asian Journal of Management Sciences*, 03(08), 2015, 10-18.

[16] Jamilu A. Adamu (2013), A Guide to Financial Mathematics and Risk Management for Nigeria, Book Published by Delcon Press, Suleja, Niger, ISBN: 978 – 223 – 529 – 6, First Edition 2013.

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- [17]** Jamilu A. Adamu (2014), Modern Approach to Financial Risk Management, Book Published by Delcon Press, Suleja, Niger, ISBN: 978-978-942-265-4, First Edition 2014.
- [18]** Jamilu A. Adamu (2014), Understanding Financial Risks, Book Published by Delcon Press, Suleja, Niger, ISBN: ISBN: 978-978-942-266-1, First Edition 2014.