MAIYAMA
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Research Interest

Cloud Computing Platform performance researcher focusing on investigating the cloud computing infrastructure performance, modelling, analysis, and testing as well as performance vs. security trade-off evaluation. Current research focuses on the development of machine learning models for performance and security analysis in a cloud computing environment using production datasets. Prior to that, I have participated in a collaborative research project between IBM – US, DBI – Nigeria & UDUS – Nigeria, where we successfully initiated, planned, designed and developed a prototype application 'Answers for Farmers' which aimed at assisting farmers with information using a basic mobile phone.

Qualifications

PhD. Computer Science – University of Bradford, UK   *Apr.2015 – Dec.2019*
MSc. Distributed Computing System – University of Greenwich, UK   *Sep.2006 – Dec.2007*
BSc. Computer Science - Usmanu Danfodiyo, University, Sokoto – Nigeria   *Sep.2001 – Dec.2004*

AFHEA. Associate Fellow of the Higher Education Academy   *Sep.2015 – Apr.2016*

Projects

- *Data processing platform (Hadoop) deployments*   *2019*
  Configured and deployed Hadoop and Spark data platforms for Big data processing research as well as laboratory sessions of the MSc in Cyber Security – Cloud Computing module – University of Bradford.
- *Analysis of Cloud Dataset Trace Collected from 40k-Nodes for 8 days*   *2020*
  (Cluster data collected from production clusters of Alibaba for cluster management research)
- *BradStack – Network Security Assessment and Evaluation*   *2017*
  (Bradford University OpenStack Project (BradStack)
- *BradStack – Building OpenStack from Ground Up*   *2016*
- *Research 'Collaboratory' Project*   *Sep.2009 – Jan.2011*
  (UDUS, Digital Bridge Institute (DBI) & IBM-US)

Academic and Industrial Experience

- *Graduate Teaching Assistant/Demonstrator*   *Sep.2015 – Apr.2020*
  (University of Bradford, UK)
- *Lecturer in Computer Science (Assistant Lecturer – Lecturer I)*   *Aug 2008 – Mar 2015*
  (Usmanu Danfodiyo University, Sokoto – Nigeria)
- *IT Support   University of Greenwich London – UK*   *Sep.2007 – Oct.2007*

Awards

- *Petroleum Technology Development Fund Nigeria – PhD Scholarship Award*   *2015*
- *Kebbi State Government of Nigeria – MSc Scholarship Award*   *2006*
- *Federal Government University Undergraduate Scholarship Award.*   *2002*

Publications

- **K. M. Maiyama,** Demetres D. Kouvatsos: Performance Modelling and Analysis of OpenStack IaaS CCP Architecture. Journal of Cloud Computing Advances, Systems and Applications (**Under Review**).

- Bashir Mohammed, Babagana Modu, **Kabiru. M. Maiyama**, Hassan Ugail, Irfan Awan, Mariam Kiran: Failure Analysis Modelling in an Infrastructure as a Service (IaaS) Environment, ELSEVIER Journal of Electronic Notes in Theoretical Computer Science, Vol. 340, Pages 41-54, ISSN15710661, 2018.
- Bashir Mohammed**,** Mariam Kiran, **Kabiru M. Maiyama**, Mumtaz M. Kamala, Irfan-Ullah Awan: Failover strategy for fault tolerance in cloud computing environment, Software: Practice and Experience; DOI:10.1002/spe.2491, ISSN:00380644, April 2017.
- Abba Almu, **K. M. Maiyama**: A Textual Case-Based Mobile Phone Diagnosis Support System, Nigerian Journal of Basic and Applied Sciences 18 (2), ISSN 0794-5698, 2010.
- **Maiyama, K. M**., Kouvatsos, D.D.: Performance vs Security Trade-offs Analysis of Virtualisation in IaaS Cloud Computing Platforms In: 35th Annual UK Performance Engineering Workshop, Leeds UK, 16 December 2019, pp. 12 – 27.
- **K. M. Maiyama**, D. Kouvatsos, B. Mohammed, M. Kiran and M. A. Kamala, "Performance Modelling and Analysis of an OpenStack IaaS Cloud Computing Platform", 2017 IEEE 5th International Conference on Future Internet of Things and Cloud (FiCloud), Prague, 2017.
- **K. M. Maiyama**, A. P. Namanya, B. Mohammed**,** M. Kiran, D. D. Kouvatsos and M. A. Kamala; Analytical Performance Evaluation of OpenStack IaaS Cloud Using M/M/1 and M/M/c Queues, 32nd UK Performance Engineering Workshop & Cyber Security Workshop (UKPEW & CyberSecW - 2016).
- Bashir Mohammed, Mariam Kiran, Irfan-Ullah Awan, **Kabiru Maiyama**; Optimising Fault Tolerance in Real-Time Cloud Computing IaaS Environment. The 4th International Conference on Future Internet of Things and Cloud (FICLOUD 2016), Vienna, Austria, August 2016.
- Bashir Mohammed, Mariam Kiran, Irfan-Ullah Awan, **Kabiru M. Maiyama**; An Integrated Virtualized Strategy for Fault Tolerance in Cloud Computing Environment. 2016 Intl IEEE Conferences on Ubiquitous Intelligence & Computing, Advanced and Trusted Computing, Scalable Computing and Communications, Cloud and Big Data Computing, Internet of People, and Smart World Congress (UIC/ATC/ScalCom/CBDCom/IoP/SmartWorld), Toulouse, France, 18-21 July 2016.
- Mariam Kiran, **Kabiru Maiyama**, Haroon Mir, Bashir Mohammed**,** and Ashraf Al-Oun; Agent-based Modelling as a Service on Amazon EC2 Opportunities and Challenges, 8th IEEE/ACM International Conference on Utility and Cloud Computing (UCC 2015), Limassol, Cyprus.
- Bashir Mohammed, S Moyo, **K.M. Maiyama**, S. Kinteh; Technical Report on Deploying a highly secured OpenStack Cloud Infrastructure using BradStack as a Case Study. ArXiv preprint arXiv:1712.09152, 2017.

Professional Affiliations

- Member, **Association of Computing Machinery (ACM).**
- Member, **Institute of Electrical and Electronics Engineers (IEEE).**
- Member, **IEEE Computer Society.**
- Member, **British Computer Society (BCS).**

Professional Services

- **Reviewer** – IEEE's Access Multidisciplinary Open Access Journal 2018.
- **Programme Committee Member** – The 5th International Conference on Future Internet of Things and Cloud (FICLOUD 2017), Prague, Czech Republic, August 2017.
- **Programme Committee Member** – 32nd Annual UK Performance Engineering Workshop & Cyber Security Workshop (UKPEW & CyberSecW) – September 2016.

Technical Skills & Area of Expertise
(**Acquired Expertise under academic and professional experience)**.

- **Programming and Libraries**: Java, Python, C#, JavaScript, C, C++, HTML, CSS, SVG, PHP, JSP, and SQL.Python's (Pandas, NumPy, SciPy, Scikit Learn, Keras, Matplotlib, and Seaborn), MatLab's (dataviz_toolbox), JavaScript's (D3js, Chartsjs, and Threejs)
- **Machine Learning:** Data processing and purification techniques.Supervised learning (Classification, Regression, dimensional reduction, structured prediction, anomaly detection), Unsupervised learning (Clustering-hierarchical clustering), (Anomaly Detection-Local Outlier factor), (Neural Network - Generative adversarial network).
- **Network Security and Administration:** Nagios, Wireshark, Putty, Bitvise, Ansible, Real-time network flow analyser, DNS, FTP, and SNMP.