John A. Quinn

http://jquinn.air.ug jq@sunbird.ai
Google Ghana, Independence Avenue, Accra +44(0)7925 455326
Google Scholar profile

Experience

Google Research 11.2018 – present
Senior Research Software Engineer at Google Ghana, leading the Open Buildings project to map the buildings of the developing world using machine learning applied to satellite imagery.

Sunbird AI 06.2019 – present
Director of non-profit initiative based in Uganda, aimed at developing open-source AI systems for social impact. Current focus on environmental sensing and language technology.

United Nations Global Pulse 12.2013 – 08.2016
Technical lead for data science projects within Africa, using a variety of large scale data sources including telecoms, remote sensing and language data for humanitarian and early warning applications.

Makerere University 08.2007 – 03.2018
Lecturer in Computer Science (2007–2010); Senior Lecturer in Computer Science (2010–2016); Honorary Associate Professor in Computer Science (2017–2018), and a founder of the Artificial Intelligence Research group (http://air.ug).

Tokyo Institute of Technology 11.2012 – 02.2013
Visiting Researcher in the machine learning/computational statistics lab of Prof. Masashi Sugiyama, working on methodology for anomaly detection and time series analysis.

Clevermed Ltd 04.2003 – 07.2007
Software developer, working on medical monitoring systems which were deployed in intensive care units across the UK.

University of Edinburgh 11.2002 – 07.2007
Research programmer and PhD student, School of Informatics. Applying machine learning and data modeling techniques to the problem of real-time physiological monitoring of premature babies receiving intensive care.

Sapient Corporation 07.2000 – 03.2002
Software developer for US technology consultancy, based in London office.

Qualifications

University of Edinburgh 2003 – 2007
PhD, Machine Learning. Supervisor: Chris Williams.
Thesis title: *Bayesian Condition Monitoring in Neonatal Intensive Care.*

University of Cambridge 1997 – 2000
B.A., Computer Science

Selected Publications

- B. Akera, J. Mukiibi, L.S. Naggayi, C. Babirye, I. Owomugisha, S. Nsumba, J. Nakatumba-Nabende, E. Bainomugisha, E. Mwebaze, J. Quinn. *Machine Translation For African Languages: Community Creation Of Datasets And Models In Uganda.* ICLR 2022 Workshop on African Natural Language Processing.

- W. Sirko, S. Kashubin, M. Ritter, A. Annkah, Y.S.E. Bouchareb, Y. Dauphin, D. Keysers, M. Neumann, M. Cisse, J. Quinn. *Continental-scale building detection from high resolution satellite imagery.* arXiv:2107.12283, 2021.

- T. Logar, J. Bullock, E. Nemni, L. Bromley, J.A. Quinn, M.A. Luengo-Oroz. *PulseSatellite: A Tool Using Human-AI Feedback Loops for Satellite Image Analysis in Humanitarian Contexts.* Proceedings of AAAI 2020.

- J.A Quinn, M.M. Nyhan, C. Navarro, D. Coluccia, L. Bromley, M. Luengo-Oroz. *Humanitarian applications of machine learning with remote-sensing data: review and case study in refugee settlement mapping.* Philosophical Transactions of the Royal Society A 376(2128), 2018.

- N. Newman, L.F. Bergquist, N. Immorlica, K. Leyton-Brown, B. Lucier, C. McIntosh, J.A. Quinn, R. Ssekibuule. *Designing and evolving an electronic agricultural marketplace in Uganda.* In Proceedings of COMPASS 2018.

- A. Saeb, R. Menon, H. Cameron, W. Kibira, J.A. Quinn, T. Niesler. *Very Low Resource Radio Browsing for Agile Developmental and Humanitarian Monitoring.* Proceedings of Interspeech 2017.

- J.A. Quinn, R. Nakasi, P.K. Mugagga, P. Byanyima, W. Lubega, A. Andama. *Deep Convolutional Neural Networks for Microscopy-Based Point of Care Diagnostics.* Proceedings of the International Conference on Machine Learning for Health Care, Journal of Machine Learning Research W&C track, Volume 56, 2016.

- R. Andrade-Pacheco, M. Mubangizi, J.A. Quinn, N. Lawrence. *Monitoring Short Term Changes of Malaria Incidence in Uganda with Gaussian Processes.* Proceedings of the 1st International Workshop on Advanced Analytics and Learning on Temporal Data (AALTD). 1425:3–9, 2015.

- J.A. Quinn, A. Andama, I. Munabi, F.N. Kiwanuka. *Automated Blood Smear Analysis for Mobile Malaria Diagnosis.* Mobile Point-of-Care Monitors and Diagnostic Device Design, eds. W. Karlen and K. Iniewski, CRC Press, 2014.

- J.A. Quinn, V.F. Martinez, L. Subramanian. *Computational Sustainability and Artificial Intelligence in the Developing World.* Invited paper in Artificial Intelligence Magazine, Fall 2014.