

# CURRICULUM VITAE

## NELSON WASSWA

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### BIOGRAPHY

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Nelson Wasswa is a Ugandan Innovator and Technologist with a Bachelor of Science degree in computer science from Makerere University. He is the executive director and founder of Sodzo Foundation, a non-for-profit organization at the fore front of pushing the human race forward through innovative technology solutions. In 2020, Nelson was selected by the Shuttleworth Foundation to become a fellow and selected to become a Green Ambassador for the Climate in Africa by the Climate Change Africa Opportunities (CCAO) in the same year, for his innovative efforts towards creating resilient and social inclusive community driven innovations. He is a previous member of the of the AidData Summer Fellowship 2014 and served as a research associate of the Artificial Intelligence & Data Science Lab at Makerere University in Uganda and also former Off-shore SharePoint business analyst and developer at Application Training Solutions (ACTS) in Jacksonville, Florida, USA. Nelson is passionate about developing practical technology tools for the most challenges of our lifetime with reliance on science and evidence based approaches.

### PROFESSIONAL EXPERIENCE

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2020 – Date      Executive Director, Sodzo Foundation, Uganda

- Founded Sodzo Foundation with the Fellowship Grant I received from Shuttleworth Foundation worth \$305,000/= with the intention of pushing the human race forward by solving the most pressing challenges of our lifetime.
  - Developed LAWUNA an open source project that identifies, detects, captures and monitors macro plastic pollution on the shores of freshwater bodies using real-time drone, sensors and smart phone imagery.
  - Developing a real-time glacial monitoring project that is able to predict glacial melting and retreat on Mountain Rwenzori to prevent flooding and landslides in communities as well as shocks and stress in people.
  - Developing a machine learning web automated app for human rights violations prediction in the East African region.
- Responsible for the overall leadership management, and promotion of Sodzo Foundation.
- Shape and set the overall organization's strategic direction, review budgets and expenditures, fundraise and mobilize funding, potential partners and identify challenges that can be solved using technology and are global in nature.
- Ensure that services and funding relationships are robust enough to meet and exceed organization goals and objectives.
- Engage in productive and professional working relationship between the board, funders and the staff members.

- 2020 - 2021      Fellow, Shuttleworth Foundation, South Africa  
Based in Kampala, Uganda, I worked on a \$305,000/= USD funded open source project called **LAWUNA** that identifies, detects, captures and monitors macro pollutants on the shores of fresh water bodies using real-time drone, sensors and smart phone imagery.  
*Highlights:*
- Collected over 45GBs of plastic data.
  - Sensitized over 27,000+ people in communities along the shores of Lake Victoria as well as islands where we operate.
  - Engaged community plastic collection associations to recycling companies to help fight poverty while beating the plastic scourge problem at the same time.
  - Encouraged and sensitized 478 women and girls on islands and shores of lake Victoria on the benefits of collecting, segregating and storing of plastics as well as changing family/home social and consumption behaviors and perception on plastic pollution
- 2013-2019      Research Associate, Makerere University Artificial Intelligence & Data Science Lab, Uganda
- Researched on how water can be assessed using smart phone image capturing with reliance on turbidity meter principle under the project called **Water4Lyf**.
  - Project innovation was extended to a final year project to full implementation in real world scenarios and officially handed over to National Water and Sewerage Corporation.
- 2014-2018      Offshore share Point Business Analyst & Developer, ACTS, Jacksonville – Florida, USA
- Implemented application development requirements with a constant focus on coordinating business efficiencies.
  - Liaised with IT infrastructure services, in support of application maintenance and development activities.
  - Supported the business requirements for the provision of internal applications management services.
  - Co-ordinated and assisted each line of business with opportunities for shared applications and common business efficiencies.
  - Defined, planned and managed releases of application updates.
  - Supported improvement initiatives involving business applications.
  - Took responsibility for, time management, reporting, and monitoring, risk management, issue management, quality assurance and change management.
  - Acted as a technical expert for identified internal applications, and shared knowledge as appropriate.
  - Supported other application team members and off the clock resources as appropriate to the implementation of application related activities.

- 2014 AidData Summer Fellow, Williamsburg – Virginia, USA
- Placement organization was Agency For Transformation (AFT) in Kampala - Uganda, a think and do tank helping small holder farmers, their business and organizations to transform East Africa.
  - Built GIS/Geocoding of TI Uganda staff/research associates and integrated the use of AidData's geocoded data into their research.
  - Trained students/interns based at Makerere University on the use and application of GIS
  - Engaged with USAID Global Development Lab, ResilientAfrica Network (RAN) based at Makerere University.
  - Planned and executed an open data hackathon even in collaboration with ResilientAfrica Network worth \$500 prizes sponsored by USAID, AidData and Resilient Africa Network.

### **SELECTED POSITIONS**

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2020 - Present Green Ambassador for Climate In Africa

- Selected by Climate Change Africa Opportunities (CCAO) an indigenous organization supporting African resilience to climate change.

### **EDUCATION**

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2022 - Date Masters in Global Challenges, University Of Edinburgh (Virtual and Physical - Hybrid)

2015 Bachelor of Science in Computer Science, Makerere University.

2015 Geographic Information Systems & Technology (ESRI-ArcGIS Desktop & Online), College of William & Mary, Williamsburg – Virginia, USA (Online)

2013 Certificate, Technology Entrepreneurship Part 1&2, Stanford University (NovoED)

### **VOLUNTEER EXPERIENCE**

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2015 Mentor, ResilientAfrica Network, Hackathon

- I was responsible for; fostering insight, setting the tone for the hackathon. Above all, help teams define workflow, generate ideas, problem-solve, understand open datasets and develop final pitches.

*The Problem set:*

Climate Change is expected to have a significant effect on the livelihood of people living in poor communities within Uganda. Significant investments of development aid and government revenues will be necessary to reduce these negative effects and provide effective options to strengthen resilience. The objective of the Aid-Data – RAN hackathon is to use geocoded data on aid investments and other open geospatial data sources to explore climate change vulnerability and responses to strengthen resilience. This hackathon focused on the impact of climate change on Agriculture, Infrastructure, and Poverty, using geospatial data participants explored Climate Change and its effects on Agriculture, Infrastructure, and Poverty in Uganda. They were challenged to use geospatial data to develop a map, application, or visual aid that can be used to help the policy-makers design policies and make effective investments to reduce the negative impacts of climate change.

This event was made possible with the support of the United States Agency for International Development (USAID) Global Development Lab and co-sponsored by

## **BIBLIOGRAPHY**

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### **Unpublished Reports.**

Wasswa. N., Joshua, L., Claire, B., Peter. N “Detection of Water Quality Using Mobile Testing Kits in Low developing Countries.” Makerere University. June 2014.

## **TECHNICAL STRENGTHS & SKILLS**

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Team Player, Self-Driven, Results-Oriented, Supervision, Business Ethics, Training & Facilitation, Conceptual & Critical Thinking, Problem Solving, Strategic Planning & Execution, Negotiations & Contract Management, Interpersonal Communication

**Programming:** Python, HTML5, CSS3, JAVASCRIPT, JAVA, PHP, C#, Asp.Net

**Frameworks:** Angular.Js, Leaflet.js, Vue.js, WordPress, D3.Js, Drupal

**Databases:** SQL, MySQL, Mongo DB

**Documentation & Graphics:** L<sup>A</sup>T<sub>E</sub>X, Microsoft Suite, Adobe Suite Collection.

**Data Visualization:** QGIS, Tableau, ArcGIS DESKTOP & ONLINE

**Repos:** GitHub.

**Artificial intelligence:** Machine Learning, Data Mining, Deep Learning, Generalized Learning, MLOPs, Data Science & Predictive Analytics, Natural Language Processes

## **PRESENTATIONS & CONFERENCES**

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2023 .ORG Impact Awards, Washington DC, USA – Invited Impact Finalist on behalf of Sodzo Foundation through the LAWUNA project – Was held from Nov 15<sup>th</sup> – 17<sup>th</sup>, 2023.

2023 IUCN Leaders Forum, Geneva - Invited Panelist:

2023 Africa Climate Summit, Kenyatta International Conventional Centre, Kenya. Theme: Driving Green Growth & Climate Finance Solutions For Africa and the world - Invited Panelist:

2023 UN World Data Forum, Hangzhou, China. Theme: Approaches to Addressing the International Development Data.- Invited Panelist:

2021 Data Fest Kampala. Theme: Living With Data. - Invited Panelist.

2020 Makerere University AI & Data Science Lab, Application of Artificial Intelligence to monitor and solve macro plastic pollution on the shores of freshwater bodies in real-time.

2016 Makerere University AI & Data Science Lab, Modeling using Google Sketch Up

2014 Makerere University Open Day, Collection of Computing and Information Sciences. Theme: Achieving Vision 2040 through ICTs. Innovations to accelerate Ugandan's Social-Economic Transformation. February 27 & 28, 2014:-Presented, Water4lyf innovation as one of the innovations developed at (CoCIS) Makerere University and under the incubation of Resilient Africa Network.

2020 USAID HESN TechCon Conference Nov 16<sup>th</sup> - 19<sup>th</sup>, 2013. Williamsburg, Virginia, USA. Makerere University AI & Data Science Lab, Application of Artificial Intelligence to monitor and solve macro plastic pollution on the shores of freshwater bodies in real-time. Invited as an innovator of Water4lyf and presented in the market place whilst at the conference.

2013 USAID/RAN Partners meeting on April 13, Protea Hotel – Kampala, Uganda: Shared ideas as a young innovator on the USAID/RAN innovations panel.

## **FELLOWSHIPS, GRANTS, AWARDS AND MEDIA**

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- Finalists of The .Org Impact Awards 2023 [Press release](#).
- [Wasswa Takes Fight To Polluters Of Water Bodies](#). – The Observer News Paper, 2023.
- March 2022 – December 2022, Patrick J McGovern Foundation, – Sodzo Foundation Grant.
- [August 2021, Bulletin on Youths Transforming Uganda: Youth International Day. Link](#)
- March 2020 – February 2021, Shuttleworth Foundation, South Africa – Fellowship Individual Grant.
- Scholarship: AidData & College Of William & Mary, *Williamsburg, Virginia*, USA to Study, ESRI Inc's ArcGIS Desktop & Online.
- TechCon 2013 Award Winner with ResilientAfrica Network, USA.

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