

WELCOME TO THE HASH NEWSLETTER

Welcome to the newest edition of our newsletter sharing updates from the Hub for Artificial Intelligence in Maternal, Sexual and Reproductive Health! This edition dives into the latest developments within the HASH network.

We'll also be sharing a spotlight story – a fascinating look at a health professional's career move into the world of AI. Curious about what it takes to make this leap? Wondering how you can do the same? This story explores the journey, including the challenges of learning to code for a healthcare professional.

But that's not all! We've got plenty more opportunities to explore within this newsletter. And to top it all off, don't miss the fun fact at the very end – you won't want to miss this one!

Let's get started!

ABOUT THE HASH NETWORK

Dear Readers,

I am thrilled to share details about the HASH Network with you! The network is a dynamic platform fostering community engagement, collaboration, and learning in the use of AI for Maternal, Sexual and Reproductive Health (MSRH).

The HASH Network leadership runs a co-governance model led by both the HASH secretariat and sub-grantees. I am honored to serve as a co-chair representing my fellow HASH subgrantees, alongside Dr Rosalind Parkes-Ratanshi, a co-Principal Investigator on HASH. I lead the sub grantee team from University of Embu building an [AI-based Chat bot](#)



Our Mission

We are building a collaborative network to develop resilient and sustainable MSRH systems through responsible AI.

Engagement with HASH Network

The HASH Network offers five clubs to connect with like-minded individuals. These clubs host free information sessions, open to anyone with a passion for Maternal, Sexual and Reproductive Health and/or Artificial Intelligence.

These sessions promote community engagement, collaborative initiatives, and continuous learning. HASH members also actively participate in AI and MSRH events, expanding their networks and sharing valuable insights gained through their involvement with HASH.

To learn more about the HASH Network and to get the latest updates about our events: [Click Here](#)

Cheers,
Dr Victoria Mukami
Co-Chair, HASH Network

Network Clubs



Data set Club



Capacity Building Club



Gender Equity & Inclusion Club



Stakeholder Engagement Club



Scientific Communications club



Our Partners

HASH SPOTLIGHT INTERVIEW



1. Who are you and what do you do?

My name is Baker Lwasampijja, a data scientist / analyst with a rocket health or [The Medical Concierge Group \(TCMG\)](#). I also do some work with the Ministry of Health, Uganda. My basic training was a diploma in pharmacy and with it I worked for almost a decade in HIV care and management with organizations like TASO, JCRC, and Baylor Uganda.

2. What motivated your leap from conventional clinical practice to digital health?

Back in 2010, a friend and former colleague from the same organization, who worked in the lab, introduced me to an online freelancing website then called Odesk, now called Upwork.

He was earning extra income by doing virtual assistance work. I decided to try it. I soon realized that most of the jobs advertised on the platform were related to software development and website management.

I started learning how to develop, update and maintain WordPress websites. Soon I was teaching myself programming languages like PHP and SQL to basically be able to do these jobs better. To get more opportunities, I enrolled for a Bachelor of Computer Science while I continued to do my fulltime job as a Pharmacy Technician.

3. What AI innovation within the healthcare field has impressed you the most?

A company called NVIDIA partnered with Hippocratic AI to invent an AI solution called the digital nurse. The digital nurse performs all the roles of a human nurse apart from physical interactions of course.

The innovation is connected to the health information system used by the doctors to write clinical notes, diagnoses and prescription. It can make audio or video calls to the patient to share medical information. This is a \$9 per hour digital nurse as opposed to a \$90.00 per hour human nurse. I found this project very interesting because it could ease the global healthcare worker shortage.

I am also fascinated by non-invasive, rapid diagnostic technologies for diseases like Malaria, HIV, Cancer and so on. I don't think they will replace doctors, but they will definitely provide decision support

4. What advantage do you have as a health worker / medical professional working in digital health?

My background and experience in pharmacy made me aware of the pain points associated with most of the pharmacy systems that were being used in private pharmacies. Based on these experiences, I developed a solution called Rx Tera – a web-based pharmacy management solution. This product has been widely adopted as an efficient solution for pharmacy management to date.

While working with health data, my intuition and background in medical training kick in just by looking at the data. For instance, in pharmaceutical data analysis, inconsistencies like strength-pill quantity inconsistencies, diagnosis-drug mismatches, or formulation-age discrepancies can be flagged before analysis. Just a quick glance at the data can prompt the conclusion that something is off with a record.

Both these backgrounds created an opportune moment for me to study a Masters in Bioinformatics after my undergraduate degree. This is where I was introduced to Data Science and Artificial Intelligence.

5. In your health innovation work, how do you define success?

My definition of success is when someone starts using my application in the real-world because that is the only way it gets better, it's after people started using my software that I realized how much it was lacking. At this moment, you realize either the delivery method was wrong, the interface was subpar, or the predictions were inconclusive.



For me, success is just one person using your innovation in their day-to-day tasks



6. How can healthcare professionals' transition into the digital health field? What advice would you offer to someone looking to pursue a career in digital health?

From the book, 7 habits of highly successful people, one of the habits that stuck with me; **always begin with a goal in mind.** For a healthcare professional considering this leap, start by asking yourself: What do you want to achieve in the end? Define your ultimate goal clearly. With a clear end goal, even if the beginning seems challenging, you can navigate the middle ground while staying focused on your destination. Once you understand where you need to end up, mapping out the necessary steps becomes much easier.

Also surround yourself with people on the same journey or those that are already where you want to be, they will take year off of your long journey.

7. Is coding doable, is it restricted to geniuses? Can a medical worker who has been practicing for 10 years plus learn?

So coding is really giving instructions to machines to basically do something. There are hundreds of programming languages and when you are starting up it becomes a daunting task to settle on which programming language to learn first.

My advice is choose one language that solves your immediate problem learn that and build projects with it. Do not look at anything else. Every programming language, has the basics of "If" statements, Loops and functions etc.. The moment you master one, the others are easy.

8. What can organisations do to support health care professional to embrace artificial intelligence in their work?

Many organizations are hesitant about AI because they don't fully understand its capabilities yet. Rather than outright dismissal, they should be open to exploring its potential benefits. Organizations could empower employees to contribute to technological advancement.

This can be achieved by encouraging individuals to develop AI prototypes and present them for evaluation and support, regardless of their job descriptions. In essence, fostering a culture of openness and collaboration can lead to valuable AI contributions for the organization.



9. Can you share a memorable success story where digital health made a critical difference?

That would definitely be the Rocket Health story.

People know Rocket Health as the "Covid doctors" or "Whatsapp Doctors". During the national lockdown in 2020-2021, people still needed healthcare. Those living with lifelong illnesses needed their medicine.

The Medical Concierge Group or Rocket Health already had the tele-health technology in place to provide medical services without meeting people physically. We could collect lab samples, get lab results and even deliver medicines in place without having the patient directly come to a health centre and so many people benefited from the intervention. By the way, the same model continues to exist even past the COVID days.

10. Looking ahead, what excites you the most about the future of AI in healthcare? What developments or advancements are you eagerly anticipating?

One of the things that excites me are large language models like ChatGPT. The speed at which they are improving is incredible. We now have models that can write entire movie scripts, generate images, and put them into video editors to produce a full-length motion picture.

In this regard, what I am currently working on is a project where we are trying to develop a National Health data warehouse with data from all government health facilities from the community level to the National referral Hospital. As a data analyst, you handle data cleaning, exploratory analysis, and statistical modelling, creating visualizations like bar charts, line plots, and scatter plots to convey insights.

Then you craft interactive dashboards for stakeholders to delve deeper into the data. Now, imagine skipping all of that and having a large language model draw charts, generate reports, and provide insights directly from the dataset itself, just like you prompt ChatGPT. That's what we aim to achieve with this project.





Ugandans were carrying out Caesarean Sections even before colonial times!

The earliest record of successful Caesarean sections in Uganda is set in 1879 in Buganda Kingdom, during the reign of King Mutesa I. Robert W. Felkin, the British medical missionary, and explorer, reported in his paper Notes on Labour in Central Africa that the Baganda had been performing this highly skilled surgery long before the colonialists came.

The indigenous people used banana wine as a disinfectant and anesthetic, red hot iron to stop the bleeds, polished iron pins to close the wounds (with intermittent removal post-surgery), and applied a firm dressing using bark cloth. According to the account, the mother was pain-free throughout the surgery and was breastfeeding her healthy baby within two hours. This is akin to what doctors use in modern medicine today. Find out more about this [here](#)

News from the HASH Team

Phase 2 of AI4D Announced

In November 2023, [IDRC](#) announced a [new partnership](#) with additional funding from the United Kingdom's Foreign, Commonwealth and Development Office to support phase 2 of the successful [Artificial Intelligence for Development](#) (AI4D) program. This phase will further the implementation of a shared vision for AI for health, agriculture, climate change, gender and education in Africa and beyond.

The [Responsible AI Lab](#) (RAIL) at the Kwame Nkrumah University of Science and Technology (KNUST) hosted the AI4D Phase 2 workshop at the Labadi Beach Hotel in Accra from 5th to 8th February 2024. In this meeting, leaders from AI4D hubs and other stakeholders convened to collaborate and plan for the program's future and its next phase. As a result of the meeting, HASH was awarded a 1M CAD grant to implement phase 2, focusing on innovation and scale-up. The new phase is due to start in July-September 2024. We are thrilled to continue supporting and expanding the HASH network.

HASH AI4D Knowledge Synthesis webinar recording out!

AI4D hosts 6-weekly Knowledge Synthesis webinar where African AI researchers share their work with the AI4D family & the world. On 9th November 2023, HASH led the webinar titled AI in Healthcare, Representativeness and Medical Ethics. The webinar was moderated by Dr Elizabeth Oseku, the HASH project Coordinator. It featured other HASH members as panellists; Dr Nneka Mobisson (MDoc Healthcare); Dr Rose Nakasi (Makerere AI Lab); Sylvia Nabukenya (PhD Fellow in Bioethics) and Wisdom Caesar Favor (Infectious Diseases Institute).

The panellists shared their experiences of fronting AI for health in Africa and provided a well-rounded perspective of recommendations and best practices for research and innovation in the sector. The recording of this informative webinar is now available [here](#).

Upcoming Webinars

Human Rights & AI: Inclusive Human Rights Frameworks for New Technologies

Attend this webinar to understand how Human Rights Frameworks can be the starting point for the creation of new tech & innovation!

 23 May  1600-1700 CET

 **To register for the webinar:**
[Click here](#)

HASH Network Club Webinars

Gender Equity & Inclusion Club Event

May: Webinar to discuss the GEI considerations, evaluation/assessment at model testing and evaluation stage

Data set Club Event

June: Webinar – How to Identify or Collect a Relevant Dataset for Your AI Project

Stakeholder Engagement Club Event

June: Workshop on Building Effective Stakeholder Communication Strategies

To visit
the HASH
website

