

Claire Najjuuko

Contact	Phone: +1(314) 333-9805 E-mail: c.najjuuko@wustl.edu St. Louis, MO												
Profile	I am Ph.D student in Computational and Data Sciences Program at McKelvey School of Engineering, Washington University in St. Louis. My research interests lie at the intersection of data science and public health. My work focuses on leveraging advanced computational methods, including machine learning predictive models and large language models, to drive innovation in healthcare delivery and improve public health outcomes. I am particularly interested in global health, child health, HIV care, and healthcare-associated infections surveillance.												
Education	<table><tr><td>Washington University in St. Louis Ph.D. in Data and Computational Sciences</td><td>St. Louis, MO 2023-date</td></tr><tr><td>Makerere University Bachelors of Science in Telecommunications Engineering</td><td>Kampala, UG August 2016-2021</td></tr></table>	Washington University in St. Louis Ph.D. in Data and Computational Sciences	St. Louis, MO 2023-date	Makerere University Bachelors of Science in Telecommunications Engineering	Kampala, UG August 2016-2021								
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Publications	Najjuuko C , Brathwaite R, Xu Z, Kizito S, Lu C, Ssewamala FM. Using machine learning to predict poor adherence to antiretroviral therapy among adolescents living with HIV in low resource settings. AIDS. 2022 Apr 20:10-97. https://doi.org/10.1097/QAD.0000000000004163												

Tutlam NT, Nabunya P, Kizito S, Migadde H, Ssentumbwe V, Namuwonge F, **Najjuuko C**, Mugisha J, Sensoy Bahar O, Mwebembezi A, Ssewamala FM. The Impact of Group-Based Interventions on Emotional and Behavioral Difficulties among Adolescents Living with HIV: The Suubi4Stigma Cluster Randomized Controlled Trial. *Journal of Child and Family Studies*. 2025 Feb 12:1-9. <https://doi.org/10.1007/s10826-025-03015-0>

Nabunya P, Migadde H, Namuwonge F, Mugisha J, Kirabo W, Ssentumbwe V, **Najjuuko C**, Raymond A, Bahar OS, Mwebembezi A, McKay MM. "Feasibility and acceptability of Group-based stigma reduction interventions for adolescents living with HIV and their caregivers: the Suubi4Stigma Randomized Clinical Trial (2020/2022)". *AIDS and Behavior*. 2024 Feb 3:1-2. <https://doi.org/10.1007/s10461-024-04284-4>

Nabunya P, Ssewamala FM, Kizito S, Mugisha J, Brathwaite R, Neilands TB, Migadde H, Namuwonge F, Ssentumbwe V, **Najjuuko C**, Bahar OS. "Preliminary Impact of Group-Based Interventions on Stigma, Mental Health, and Treatment Adherence Among Adolescents Living with Human Immunodeficiency Virus in Uganda". *The Journal of Pediatrics*. 2024 Jun 1;269:113983. <https://doi.org/10.1016/j.jpeds.2024.113983>

Kizito S, Namuwonge F, Nabayinda J, Nalwanga D, **Najjuuko C**, Nabunya P, Atwebembere R, Namuyaba OI, Mukasa M, Ssewamala FM. "A Cluster-Randomized Controlled Trial of an Economic Strengthening Intervention to Enhance Antiretroviral Therapy Adherence among Adolescents Living with HIV". *AIDS and Behavior*. 2024 May;28(5):1570-80. <https://doi.org/10.1007/s10461-024-04268-4>

Nabunya P, Cavazos-Rehg P, Mugisha J, Kasson E, Namuyaba OI, **Najjuuko C**, Nsubuga E, Filiatreau LM, Mwebembezi A, Ssewamala FM. "An mHealth Intervention to Address Depression and Improve Antiretroviral Therapy Adherence Among Youths Living With HIV in Uganda: Protocol for a Pilot Randomized Controlled Trial". *JMIR Research Protocols*. 2024 Mar 8;13(1):e54635. <https://doi.org/10.2196/54635>

White PJ, Okello D, Casey BP, **Najjuuko C**, Lukanga R. Co-designing with engineers for community engagement in rural Uganda. *Design Science*. 2023 Jan;9:e12. <https://doi.org/10.1017/dsj.2023.10>

Najjuuko C, Ayebare GK, Lukanga R, Mugume E, Okello D. "A survey of 5G for rural broadband connectivity". In 2021 IST-Africa Conference (IST-Africa) 2021 May 10 (pp. 1-10). IEEE. <https://ieeexplore.ieee.org/abstract/document/9576832>

Lukanga R, Ayebare GK, **Najjuuko C**, Mugume E, Okello D. "Leveraging TV white spaces for rural broadband connectivity". In 2021 IST-Africa Conference (IST-Africa) 2021 May 10 (pp. 1-8). IEEE. <https://ieeexplore.ieee.org/document/9576962>

Manuscripts Under Review

Najjuuko C, Brathwaite R, Mutumba M, Childress S, Nannono S, Namatovu P, Lu C, Ssewamala FM. "Identification of Illicit Substance Use (ISU) Predictors in Young Adults living with HIV in Low Resource Communities in Uganda: A Machine Learning Approach". Under review at *AIDS and Behavior*.

Najjuuko C, Xu Z, Kizito S, Lu C, Ssewamala FM. "Patterns of maternal, newborn, and child health interventions coverage, and associated socioeconomic disparities in sub-Saharan Africa: A machine learning cluster analysis". Under review at *Nature Communications*.

Other Research Training

Researcher Resilience Training Program, Fellow 2023

Researcher Resilience Training Program, Fellow 2024

Work Experience **International Center for Child Health and Development**, *Data Manager* Masaka, UG
Report to: Principal Investigator *Duration* (September, 2021-July 2023)

Study Coordination:

- (mHealth: Funded by McDonnell Scholars Academy, mHealth focused on Developing and refining a mobile health intervention protocol to address depressive symptoms among youth living with HIV in Uganda. PIs: Proscovia Nabunya, Patricia Cavazos-Rehg)

Data Management:

- (M-Suubi: A multi-level Integrated Intervention to Reduce the Impact of HIV Stigma on HIV treatment outcomes among adolescents living with HIV in Uganda R01MH126892)
- (Bridges R2: Examining the longitudinal impacts of an economic intervention on HIV risk prevention and care continuum outcomes among orphaned youth transitioning to young adulthood R01HD070727-02)
- (Suubi4Stronger Families: Addressing Child Behavioral Health by Strengthening Financial Stability and Parenting among Families in Uganda R01MH128905)
- (Suubi4Stigma: Addressing HIV-associated stigma among adolescents R21MH121141)
- (Suubi+Adherence R2:Examining the longitudinal HIV treatment adherence among youth living with HIV (YLHIV) transitioning into young adulthood R01HD074949)
- (Kyaterekera: A Combination Intervention Addressing Sexual Risk-Taking Behaviors among Vulnerable Women in Uganda, is a 5-year longitudinal study R01MH116768)

Computer Knowledge and Experience

Programming and Scripting Languages: Python, R, Matlab, LaTeX
Libraries and Frameworks:
ML/DL: scikit-learn, TensorFlow, PyTorch, XGBoost
LLMs/NLP: HuggingFace Transformers, spaCy, OpenAI APIs
Tools and Environments: Jupyter, Git/GitHub, Docker, VSCode
Statistical Software: STATA, SPSS

Conferences, Workshops and Seminars

AI for Health Symposium, Washington University in St. Louis, 2024
 AI for Health Symposium, Washington University in St. Louis, 2023
 Forum on Child and Adolescent Global Health Research and Capacity Building, 2023.
 Forum on Child and Adolescent Global Health Research and Capacity Building, 2022.
 The 6th National Conference on Communications, 2020.
 Uganda Institution of Professional Engineers Students Workshop, 2020.
 Global Grand Challenges Summit, Kampala Satellite Event, 2019.
 Wireless Communication Workshop organized by IEEE Communication Society, 2018.

Last update: March 27, 2025