

Innocent Nzimenyera

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Summary Section

Digital and data leader with expertise in designing scalable data pipelines, managing databases, and building cloud-based architectures. Skilled in SQL, Python, and data integration to support advanced analytics and decision-making. Strong background in automation, ETL processes, and data governance with experience delivering solutions for international organizations, governments, and research institutions. Adept at bridging data engineering with applied AI and statistical methods to improve efficiency, data quality, and stakeholder impact.

Education Background

Carnegie Mellon University

Master of Science in Information Technology

Specialization in Applied machine learning, Data Science

University of Rwanda, College of Science and Technology

BSc (Hons) in Computer Science

Group scolaire Remera Rukoma

High school certificate in Mathematics, Physics, and Computer Science

Aug 2022–May 2024

Kigali, Rwanda

Sep 2015–Nov2019

Huye and Kigali, Rwanda

Sep 2012–Nov2014

Kamonyi, Rwanda

Work Experience

Global Green Growth Institute.

AI and Data Analyst - Remote

Nov 2024–Present

Seoul, South Korea

- Designing and deploying dashboards enabling policymakers to explore the Green Growth Index.
- Automating **ETL pipelines** to reduce manual data collection and improve efficiency.
- Developing an online policy simulation model incorporating dozens of variables using a statistical and AI-driven economic model: <https://ggindex-simtool.gggi.org/>
- Took the initiative to decrease time spent on data collection and easy processing through pipeline automation.
- Supporting publication of technical reports and policy briefs.
- Train team members on modeling, coding best practices, and reproducible pipelines.

United Nations/International Telecommunication Union (ITU)

AI for Good Scholar - Hybrid

Apr 2024- July 2025

Geneva, Switzerland

- Conducted research on AI applications for UN Sustainable Development Goals.
- Analyse and improve the AI use cases.
- Collaborated with international use cases authors on AI projects
- Communicating findings and insights effectively

Global Green Growth Institute.

Data Science Consultant - Remote

June 2021–Oct 2024

Seoul, South Korea

- Collaborate with the GGPM Team to establish databases, tools, guidelines, and documentation. Conduct data collection, analysis, and reporting for the Green Growth Index and Simulation Tool.
- Built Python-based data pipelines to extract, clean, and integrate international datasets.
- Applied statistical methods to enhance data quality and reliability.
- Supported **capacity-building workshops** and conferences on data and analytics.

Carnegie Mellon University.

Graduate Teaching Assistant (Data Analytics and Practicum courses)

Aug 2023–May 2024

Kigali, Rwanda

- Assisted delivery of advanced data analytics courses using Python.
- Supported students in data modeling, pipeline development, and coding assignments.
- Implemented automated grading systems using AI algorithms.

- Conducted requirements analysis and data collection using quantitative and qualitative methods.
- Applied AI tools for data insights and automated reporting.
- Delivered visual analytics dashboards to share results with project teams.

Rwanda Ministry of ICT and Innovation.
Digital Ambassador

Sept 2019-June 2021
Kigali, Rwanda

- Facilitated digital literacy training, increasing citizens' access to online services.
- Designed and updated ICT course content to meet community needs.
- Created user-friendly reporting templates for use by government staff.

National Bank of Rwanda.
Intern

Jun 2018-Oct 2018
Kigali, Rwanda

- Supported IT operations including database, data warehouse, and networking tasks.
- Provided helpdesk support and technical troubleshooting.
- Conducted research on banking security and digital systems.

Ministry of Education
Data Entry Clerk

Jun 2016-June 2018
Kigali, Rwanda

- Accurately entered, updated, and validated education sector datasets.
- Performed data quality checks and ensured regular backups.
- Maintained digital and physical records for policy reporting.

Research & Technical Publications

- 2025 AI for Good Innovate for Impact report: [link](#)
- Network science and explainable AI-based life cycle management of sustainability models: [Link](#)
- Report for the "2024 AI For Good" initiative, focusing on the UN's Sustainable Development Goals (SDGs): [Link](#)
- Kenya National Green Growth Index 2023: [Link](#)
- Ghana National Green Growth Index 2023: [Link](#)
- Global Green Growth Index 2022: [Link](#)
- Global Green Growth Index 2021: [Link](#)
- Azerbaijan's Transition to Green and Inclusive Growth - A Comparative Assessment with the Central Asian Countries: [Link](#)
- Zambia National Green Growth Index 2022: [Link](#)
- Green and Blue Economy Synergy – Concepts and Methods for the OECS Green-Blue Growth Index: [Link](#)
- Efficient Connected Components Solution Using Depth-First Search Algorithm: [Link](#)

Skills

- **Data Engineering & Databases:** SQL, PostgreSQL, Oracle, Access, Data Warehousing, ETL (Python, pipelines)
- **Programming:** Python, JavaScript, Vue.js, C/C++, Java
- **Cloud & Infrastructure:** Linux, Git, Bash, Docker, GitHub/GitLab (learning Kubernetes, Spark, Terraform, AWS/GCP)
- **Analytics & Visualization:** Tableau, Power BI, R, MATLAB, Stata, SPSS, Advanced Excel
- **Machine Learning & AI:** TensorFlow, PyTorch, Scikit-learn, Keras, CNNs, RNNs, NLP
- **Languages:** Kinyarwanda (Native), English (Fluent), French (Basic), Swahili (Basic)

Projects

- Green Growth Indexes and Simulation tools: [Link](#)
- AI- Supported Green Growth Simulation Tool for Assessing SDG Co-benefits: [GitHub link](#) [website link](#)
- Efficient Connected Components Solution Using Depth-First Search Algorithm: [Link](#)
- Learn Python for Machine learning: [Link](#)

Public Service & Volunteer Work

Rwanda Space Agency & CMU-Africa. Jun 2023-April 2024

Research and Data Analyst *Kigali, Rwanda*

- Collected, cleaned, and analyzed agricultural and space-related datasets.
- Applied machine learning models to predict crop yields using spectral data.
- Delivered actionable insights to stakeholders.

United Nations. Jul 2019-June 2021

Volunteer *Kigali, Rwanda*

- Supported community mobilization and fundraising using digital platforms.
- Promoted SDG awareness through youth engagement initiatives.