

# INDABAX UGANDA CONFERENCE 2024

**Theme:** *“Ethical AI horizons: Navigating the Impact and Future of AI across diverse sectors.”*



Monday, 29 July - Friday, 2nd August 2024



Silver Springs Hotel, Bugolobi (last 2 days)

# DAY 1 – MONDAY 29TH JULY, 2024 (ONLINE)

## *Tutorials & Practicals: Introduction to AI & Machine Learning*

09:00 – 10:30

Python Fundamentals for Data Science ~ **Rose Bunmi Akinremi**

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10:30 – 11:15

**COFFEE BREAK**

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11:20 – 12:00

**Introduction to Machine Learning:** Basics, types of machine learning (supervised, unsupervised, reinforcement learning), and key concepts.  
~ **Isaac Mukonyezi**

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12:00 – 12:45

Anomaly Detection Using Isolation Forest  
~ **Claire Babirye**

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12:45 – 14:00

**LUNCH BREAK & NETWORKING**

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14:00 PM – 14:45

**Reinforcement Learning:** Basics, Q-learning, policy gradients, and applications.  
~ **Geraud Nangue Tasse**

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14:45 – 15:30

**Computer Vision:** Image preprocessing, convolutional neural networks, object detection, and image generation. ~ **Tusubira Jeremy**

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15:30 – 16:00

**COFFEE BREAK**

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16:00 – 16:45

Virtual Expert Roundtable and closing remarks  
Practical applications of AI

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17:30 – 19:00

**CLOSE DAY 1**

# DAY 2 – TUESDAY 30TH JULY, 2024 (ONLINE)

## *Tutorials & Practicals: Advanced Concepts in ML*

**09:00 – 09:45**

Machine Learning Frameworks: TensorFlow, PyTorch, sci-kit-learn, and Keras OR Big Data and ML: Handling large datasets with tools like Apache Spark, Hadoop, and distributed machine learning ~  
**Kakooza Azizi**

**09:45 – 10:30**

Building End-to-End ML Pipelines: From data collection to model deployment. ~ **Nsubuga Hassan**

**10:30 – 11:15**

**COFFEE BREAK**

**11:15 – 12:45**

AI Conversations: The Synergy of NLP and Speech Processing. ~  
**Jonathan Mukiibi**

**12:45 – 14:00**

**LUNCH BREAK & NETWORKING**

**14:00 – 14:45**

Deep Learning model for Retinopathy of prematurity stage 3 disease diagnosis.~ **Elizabeth B Mutua**

**14:45 – 15:30**

Model Interpretability and Explainability: Techniques and tools to understand and explain model predictions.~ **Chinasa T. Okolo**

**15:30 – 16:00**

**COFFEE BREAK**

**16:00 – 16:30**

Virtual Wrap-Up and Open Floor for Participant Feedback

**16:30 – 17:00**

**CLOSE DAY 2**

**DAY 3 – WEDNESDAY 31ST JULY, 2024 (ONLINE)**

# **BREAK THE SYSTEM**

## **Morning Session: Sunbird AI Showcase**

**9:00 AM - 12:00 PM**

- Introduction to Sunbird AI products (Translate, Speech, API)
- Live demonstrations and interactive sessions
- "Break the system" challenge: Participants test the limits of Sunbird AI
- User satisfaction assessment and feedback gathering

**12:00 PM - 2:00 PM**

## **BREAK**

## **Afternoon Session: Gender and AI Panel**

**2:00 PM - 3:00 PM**

- "The Role of Inclusivity in Language Model Creation: Highlighting the importance of representing diverse voices and perspectives in building language models"



# DAY 4 – THURSDAY 1ST AUGUST, 2024 (PHYSICAL)

## Parallel sessions: Ecology & Astro-physics

TIME	ECOLOGY & AI	ASTROPHYSICS & AI
9:00 - 09:45	Opportunities for Machine Learning and AI in animal behaviour, conservation, and management ~ <b>Andrew King, University of Swansea, UK</b>	Astronomy: The Past, Present, and Future & How AI Can Help ~ <b>Abigail Frost</b>
09:45 - 10:30	Pixels to Preservation: Leveraging AI for Low-Cost Camera Trap Technology. ~ <b>Lorna Kawira Mugambi, Dedan Kimathi University of Technology, Kenya</b>	Machine Learning Classifications for Astronomical Radio Surveys. ~ <b>Kushatha Ntwaetsile</b>
10:30 - 11:00	<b>COFFEE BREAK</b>	
11:00 - 11:45	Impact of background on the classification of Camera Trap Images. ~ <b>Yuri Njathi, Dedan Kimathi University of Technology, Kenya</b>	Mapping Billions of Stars with GAIA and Other Space Telescopes. ~ <b>Miguel Vioque</b>
11:45 - 12:30	Probing the limits of human understanding on the behavior of <i>Caenorhabditis elegans</i> . ~ <b>Alfonso Perez-Escudero, Paul Sabatier University Toulouse, France</b>	Big Data Challenges in Millimetre Interferometry ~ <b>James Miley</b>
12:30 - 14:00	<b>LUNCH</b>	
14:00 - 14:45	Wildlife Ecology in Africa: are ML and AI Maslow's Hammer? ~ <b>Mark Keith, University of Pretoria, South Africa</b>	- The Development in Africa with Radio Astronomy (DARA) Project: Overview and Experiences ~ <b>Kushatha Ntwaetsile &amp; Boitumelo Gaolape</b>
14:45 - 15:45	AI in Agriculture. ~ <b>Neema Mduma, Nelson Mandela African Institution of Science and Technology, Tanzania</b>	Hands On Workshop with Astronomical Data 1 ~ <b>Miguel Vioque</b>
15:45 - 16:15	<b>COFFEE BREAK</b>	
16:15 - 17:15	Open Q&A Session/Mentorship Session	Hands On Workshop with Astronomical Data 2 ~ <b>James Miley</b>
17:15- ONWARDS	<b>DEPARTURE</b>	

# DAY 5 – FRIDAY 2ND AUGUST, 2024 (PHYSICAL)

## Conference Day

8:00AM – 8:30AM

Arrival and Registration ~ All

8:30 AM – 8:45 AM

Welcome note and Opening Remarks: Organising Committee

8:45 AM – 9:25 AM

Keynote speaker: The Cutting Edge of AI: What's New and What's Next.

9:25 AM - 10:00 AM

Invited talk: Artificial Intelligence in Ecology.

10:00 AM - 10:30 AM

**GROUP PHOTO/ COFFEE BREAK/  
EXHIBITIONS**

10:30 AM - 11:20 AM

Spotlight talks: Group 1 IndabaX AI Club Kabale University ~  
Presentations from 5 selected students

11:20 AM - 12:00 PM

Invited talk: Regulatory and Policy Frameworks for Ethical AI.

12:00 PM - 1:00PM

Pannel session 1: The role of AI in climate change, Agriculture,  
Financial services, Ecology

1:00 PM – 2:00 PM

**LUNCH BREAK & NETWORKING**

2:00 PM - 2:40 PM

Invited talk: Responsible and Ethical AI

2:40 PM - 3:10 PM

Spotlight talks: Group 2 (IndabaX Makerere University club)~  
(3 selected students)

3:10 PM - 4:10 PM

Pannel session 2: AI and Healthcare: Ethical Implications and  
Innovations check

4:10 PM - 4: 20 PM

DL IndabaX Uganda clubs: The Journey

15:30 – 16:00

**COFFE BREAK**

**P.T.O**

4:20 PM - 4:30 PM

Translation Challenge on Sunbird Translate : Announcing and Awarding the winning person - **Organizing committee**

4:30 PM- 8:30 PM

Data Science Africa Uganda (DSAU) Meet-up

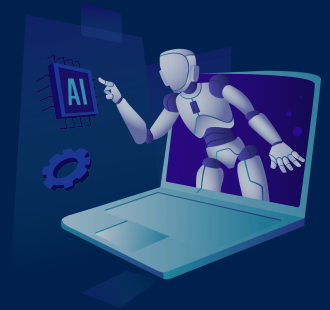
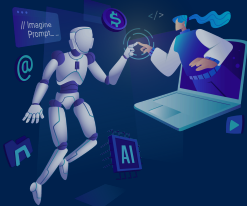
**Highlights of the evening.**

- Welcome and Introductions: Brief overview of Data Science Africa Uganda (DSAU) and its mission~ **Dr. Martin Mubangizi**
- Introducing Sunbird AI to DSAU community~ **Dr. Ernest Mwebaze**
- "Importance of Data in Relation to Uganda's Just Concluded Population Census". Discussion on Uganda's Population Census~ **UBOS representative**
- Building the DSAU Ecosystem-Open floor for questions and discussions from attendees.
- Networking and Closing Remarks: Opportunity for attendees to connect and exchange ideas.

8:30PM - ONWARDS

**DEPARTURE**

**THE END**



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