

READY TO SHAPE THE FUTURE?
Innovating today, unlocking tomorrow, Kenya's future secured

AI HACKATHON

AI FOR NATIONAL PROSPERITY, LEVERAGING INNOVATIONS FOR SUSTAINABLE
DEVELOPMENT AND SECURITY

FINAL WINNERS

1ST RUNNERS UP

TEAM PRIZE
KSHS. 1,500,000
OR
INDIVIDUAL PRIZE
KSHS. 750,000

1ST PRIZE

TEAM PRIZE
KSHS. 2,000,000
OR
INDIVIDUAL PRIZE
KSHS. 1,000,000

2ND RUNNERS UP

TEAM PRIZE
KSHS. 1,000,000
OR
INDIVIDUAL PRIZE
KSHS. 500,000

BEST IN EACH SUBTHEME
KSHS. 300,000
PER SUBTHEME

SPECIAL CATEGORIES
KSHS. 400,000
PER CATEGORY

CHALLENGE TRACKS

CYBER SECURITY & DATA PROTECTION | SECURITY, SAFETY & POLICY
SUSTAINABLE DEVELOPMENT & ECONOMIC INNOVATION | GOVERNANCE, PUBLIC POLICY &
POLITICAL STABILITY | HOMEGROWN GENERATIVE AI



BROUGHT TO YOU BY
THE NATIONAL INTELLIGENCE AND RESEARCH UNIVERSITY
TnC's Apply

REGISTER



NOW

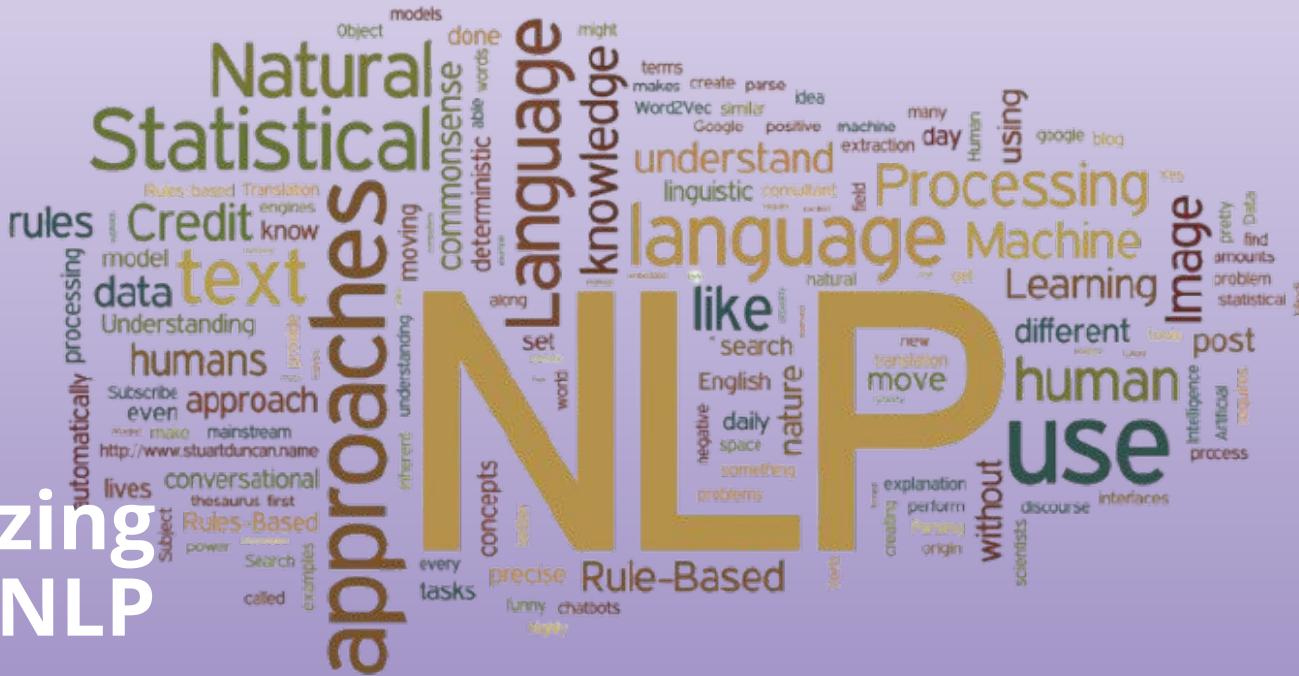
<https://aihackathon.niru.ac.ke/>

REGISTRATION DEADLINE
28TH NOV



Democratizing NLP

Rogendo

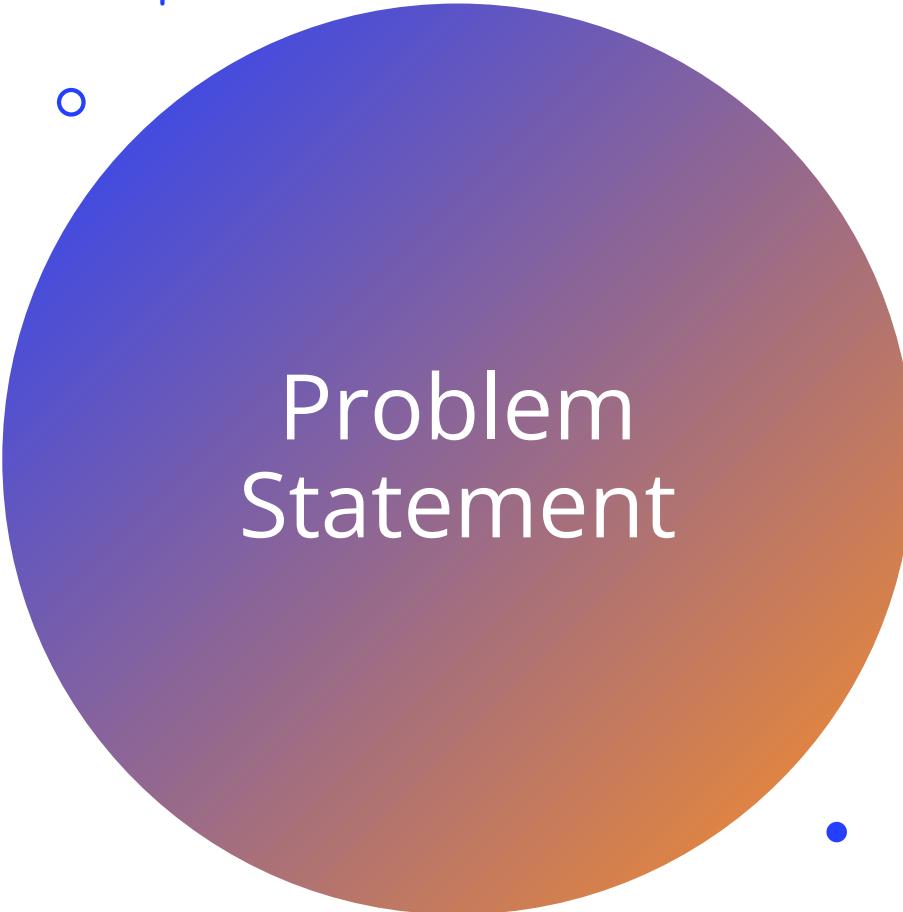




Agenda

- NLP framework
- Open Source
- Sustainable Development
- NLP Community





Problem Statement

While Silicon Valley builds billion-parameter models, Kenyan businesses **struggle with basic NLP**;

accustomed by **Limited** Data,
Unaffordable Computational resource and skills costs.



Kenya's national AI priorities

Sustainable Development



Goals

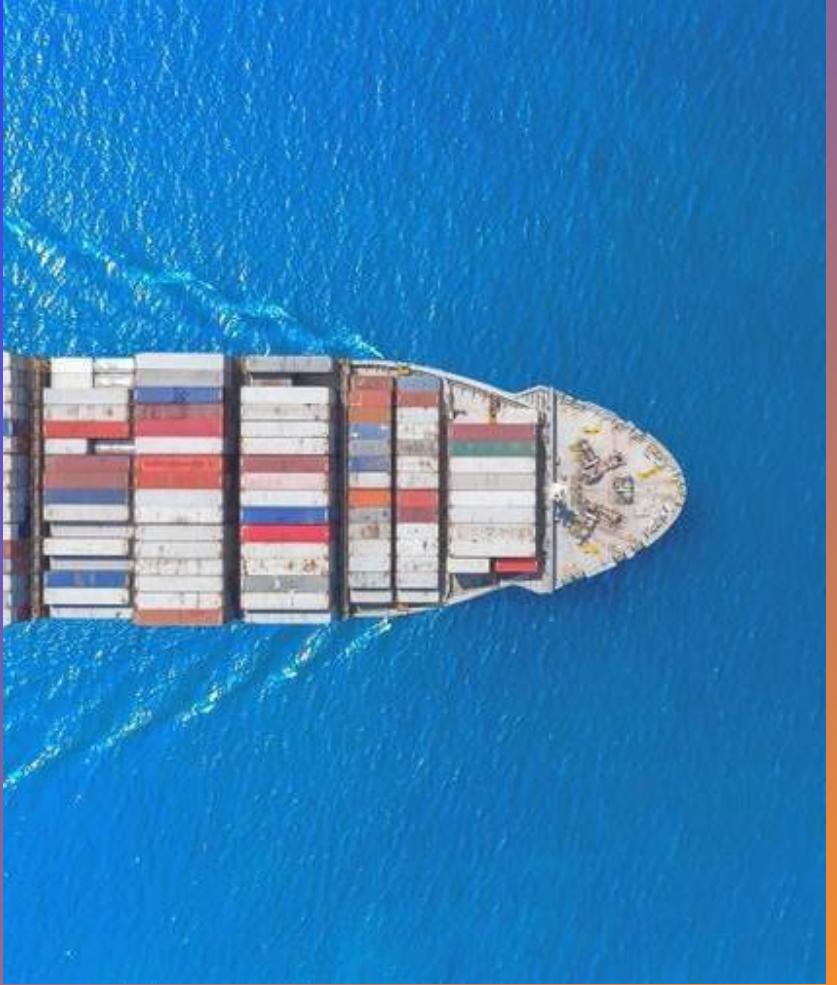
- Sustainable Development & Economic Innovation → Democratizing NLP = economic empowerment
- Governance & Public Policy → Multi-task models for government document processing
- Homegrown Generative AI → African-context aware language models
- Cyber Security → Multi-task threat detection and classification

Priorities

- "National Prosperity" → Reduces AI costs 60-80%
- "Leveraging Innovations" → Pre-trained models & Cutting-edge attention fusion techniques
- "Security" → Multi-threat detection capabilities

NLP tasks

Base Models	Classification	Quality Assurance	Question Answering	Summarization	Translation	NER	Sentiment Analysis
DistilBERT	✓ Excellent	✓ Good	✓ Good	Extractive Only	✗ Limited	✓ Good	✓ Excellent
BERT	✓ Excellent	✓ Good	✓ Excellent	Extractive Only	✗ Limited	✓ Excellent	✓ Excellent
RoBERTa	✓ Excellent	✓ Good	✓ Excellent	Extractive Only	✗ Limited	✓ Excellent	✓ Excellent
MT-Transformer	✓ Excellent	✗ Limited	✓ Good	✓ Abstractive	✓ Excellent	✓ Good	✓ Good
XLM-RoBERTa	✓ Excellent	✓ Good	✓ Excellent	✓ Abstractive	✓ Excellent	✓ Excellent	✓ Excellent
African BERT	✓ Excellent	✓ Good	✓ Good	Extractive Only	✓ African Langs	✓ Excellent	✓ Excellent
BART	✓ Good	✓ Good	✓ Good	✓ Excellent	✓ Good	✗ Limited	✓ Good



A *open-source*

Python framework
that **democratizes**
NLP development in
Africa by reducing
fine-tuning
complexity and costs

Target Users: Developers, startups,
researchers, government agencies



Our Product

- It enables developers to:
 - Fine-tune BERT, DistilBERT, RoBERTa for ANY NLP task
 - Handle multilingual/multilabel/multiclass classification
 - Support translation, QA, QA/QC, NER, sentiment, summarization
 - Create custom data structures easily
 - Combine single tasks into multi-task models
 - African devs spend weeks setting up NLP experiments
 - No unified framework for multiple NLP tasks
 - Expensive computational resources
 - Western models don't understand local context
- What we offer:**
- One framework for ALL NLP fine-tuning tasks
 - 50% faster experimentation cycle
 - Built-in African language support
 - Open-source = \$0 cost for startups

Winning Strategy



Prior

- Position as "Swahili & African Language Multi-Task AI Platform"
- Emphasize cost reduction for Kenyan businesses/government
- Highlight local context understanding
- **Show Individual Models** - Train Swahili sentiment + NER models.
- **Demonstrate Fusion** - Combine into a unified African-language model.
- **Live African Context** - Process local news + government documents.

Open source

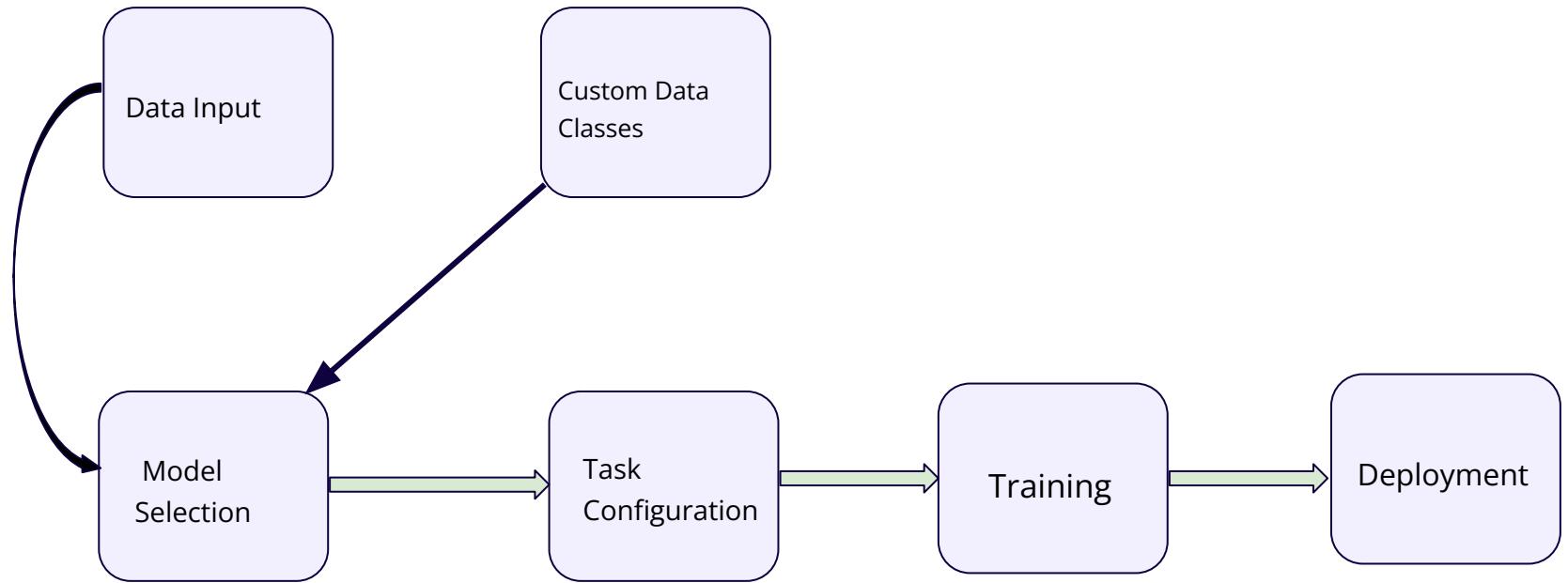
- Open source the core codebase. Find alternative Business model.
- Cool, easy to follow documentation and tutorials.

Community

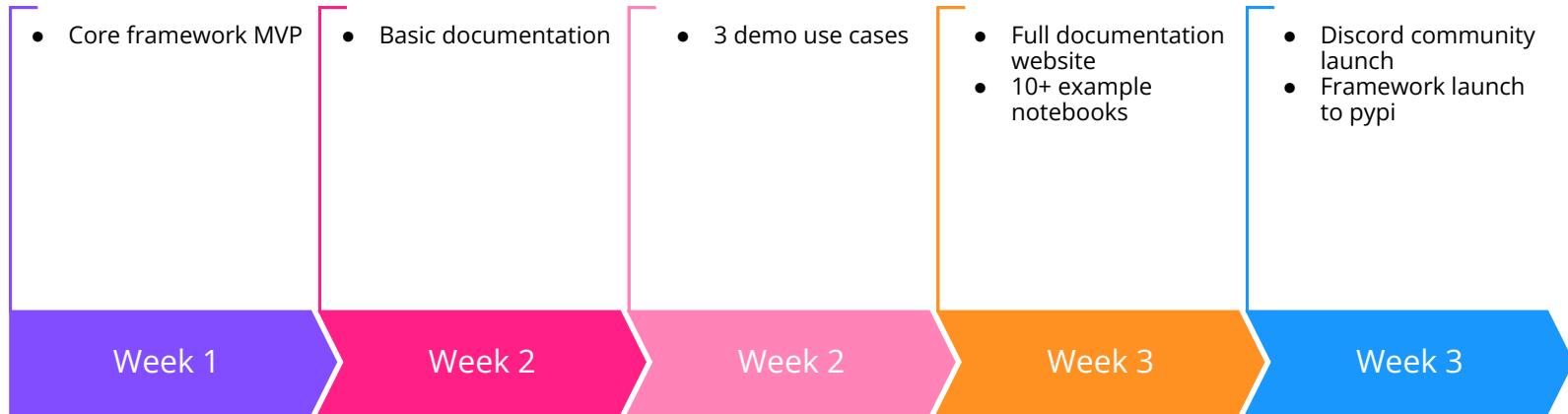
- Using the power of Slack, Discord, Huggingface and bots, create a community.
- Weekly blogs, and sharing of models, concepts, training scripts

3 immediately impactful products using Our Library:

1. Swahili Sentiment Analysis + Named Entity Recognition
2. Government Document Classification + Key Info Extraction
3. Multi-threat Cybersecurity Detection
4. Attention Fusion



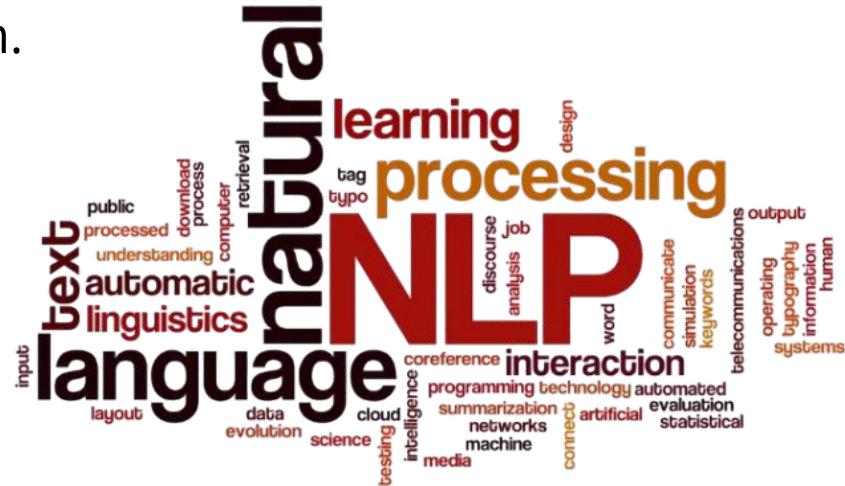
Timeline



Summary

We're not just entering a hackathon, we're launching the foundation for Africa's NLP ecosystem.

From healthcare to agriculture to governance, this framework enables African innovation across every sector.



Team

Kioko

Title

Rogendo

Title

+
•
o

THANK YOU

Rogendo

rogendopeter@gmail.com

