

# Predicting Progress Toward SDG 4

**A Global Education Classification Model**



By Deborah Muthoni Omondi

# Understanding SDG 4

- Sustainable Development Goal 4: Ensures inclusive and equitable quality education for all by 2030.
- Focus: Foundational skills (reading, math), access to education, and equity across gender and regions.
- Challenge: Many countries are not on track to meet SDG 4 targets.

By Deborah Muthoni Omondi



# **Why It's Important**

- Identify struggling countries to prioritize funding and interventions.
- Support data-driven decisions for global education organizations.

By Deborah Muthoni Omondi



# Key Findings



## 1. Best Performing Model

Random Forest model performed best (high recall for identifying “off track” countries).



## 2. Top Predictors

- Type of skill (math vs. reading).
- Education level (primary vs. secondary).
- Country/region.



## 3. Insight

No country consistently met the 75% proficiency threshold.

# Challenges To Address

---

## **Data Gaps**

Sparse or outdated data for some countries.

---

## **Simplification**

Binary “on track” vs. “off track” may oversimplify progress.

---

## **Opportunity**

Improved data collection can enhance predictions.

---

# Recommendations

---



- Invest in primary education to boost math and reading skills.
- Target interventions in regions with low proficiency (identified by model).
- Enhance data collection for more accurate, real-time monitoring.
- Deploy model as an early warning system for SDG 4 progress.

# Next Steps

- 01 Refine model with updated data.**
- 02 Partner with stakeholders to implement recommendations.**
- 03 Monitor progress toward 2030 goals.**



# Thank You

We thank you for your continued support in our efforts to contribute to the SDGs.

---

## Contact

Deborah Muthoni Omondi  
muthonideborah6@gmail.com  
+254799012337



# THE GLOBAL GOALS

---