

# Youth Unemployment in the IT Sector



- Work: Research Scholar @ilabAfrica
- Aspirations: Leverage data science to uncover insights
- Passion for Data Science: Believe in its power to drive positive change through applying data-driven approaches



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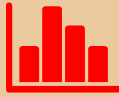


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# Problem Statement

- A hackathon to address the pressing issue of youth unemployment in the IT sector.
- Using data science techniques to uncover insights related to youth employment in Kenya's IT sector.



# Methodolgy

- **Structured Approach:**

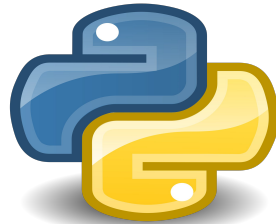
*Data Collection, Preprocessing,  
EDA, Visualization*

- **Tools and Techniques:**

*Python, Plotly, Streamlit*

- **Dashboard Deployment:**

*Interactive Visualization*



Streamlit



# Data Selection & Preprocessing



## Variable Selection

Country, age group, sex, year, population, employment categories, and education levels for analysis

## Data Cleaning and Merging

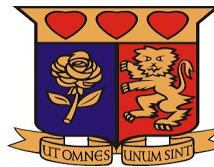
Derived metrics, like unemployment rates and shares, were calculated to provide additional context for the analysis

## Data Transformation

Derived metrics, like unemployment rates and shares, were calculated to provide additional context for the analysis

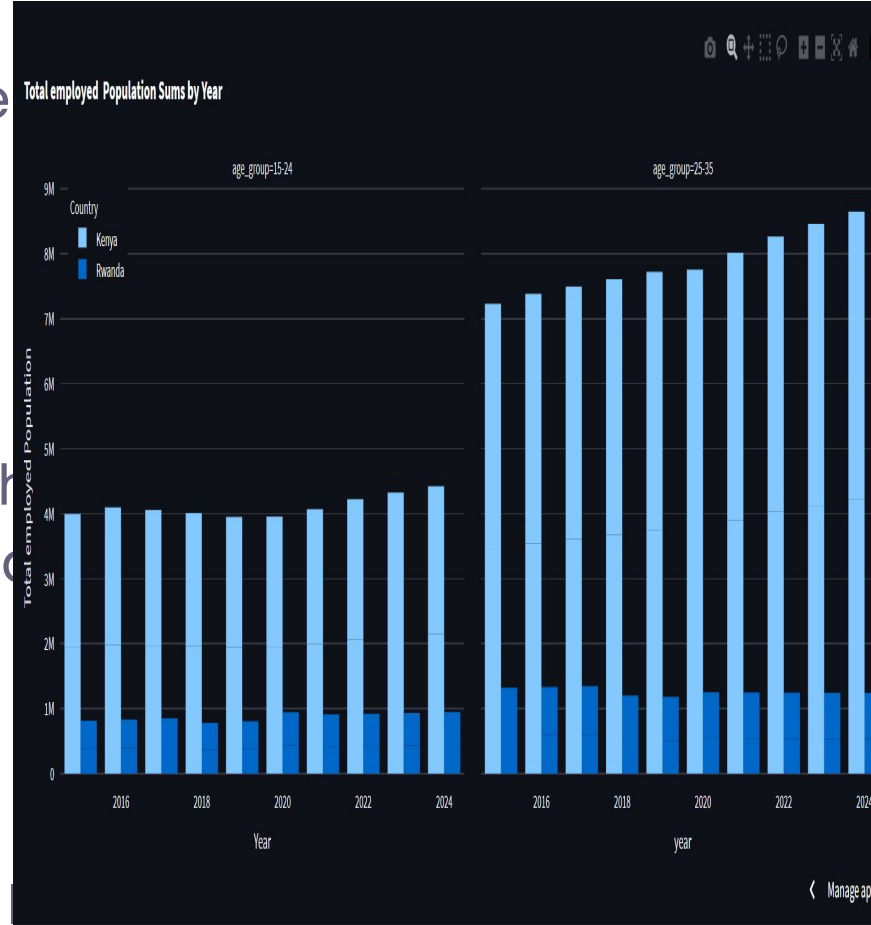
## Feature Engineering

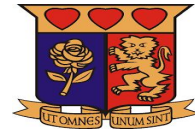
Creating new variables from the abs\_value column



# Results

- **Interactive Dashboard:** Showcase employment, education, and demographic trends. Link: [Youth Unemployment Dashboard](#)
- **Unemployment Insights:** Unemployment rates among youth across different demographics and time periods.
- **Education Impact:** the impact of education levels on employment outcomes within the

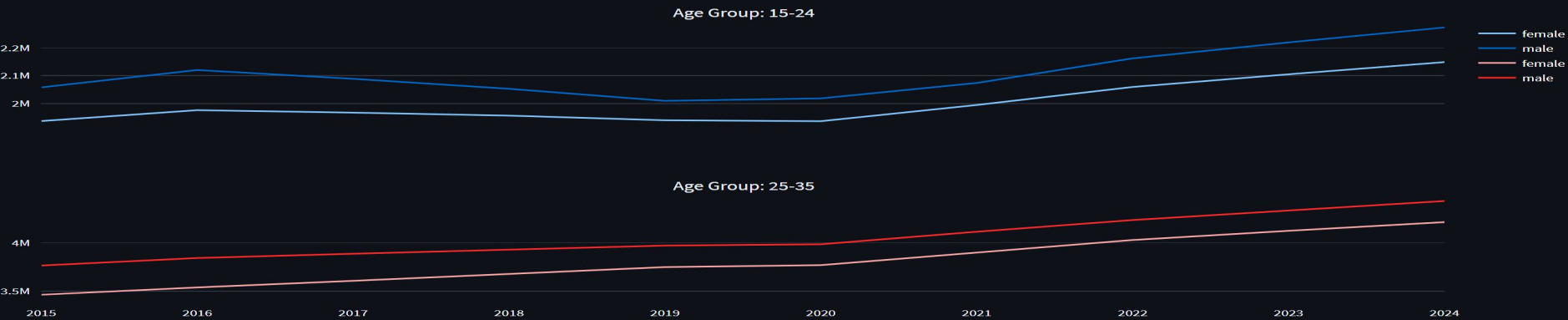




# Findings and Insights

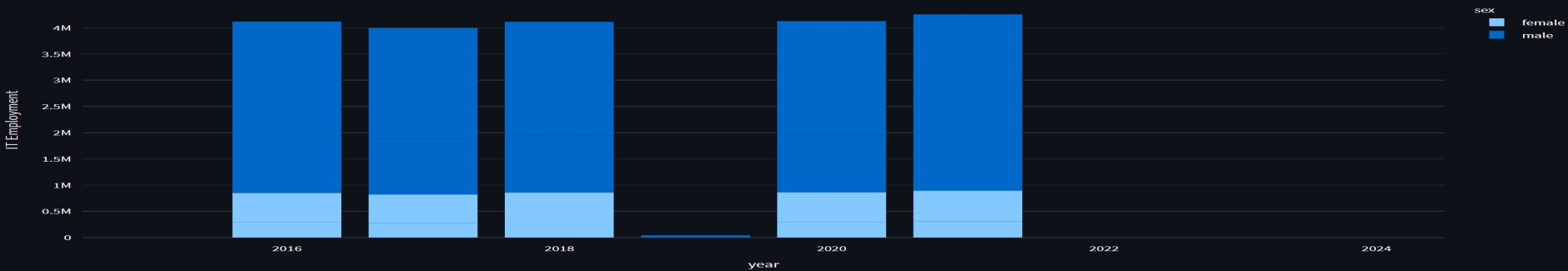
- **Employment Trends:** The analysis reveals a consistent increase in youth employment rates within the IT sector over the years.
- **Gender Disparities:** Findings indicate significant gender disparities, with males being more represented in the workforce than females.
- **Comparative Analysis:** Comparing Kenya and Rwanda's employment trends uncovers shared regional patterns and slight differences in unemployment rates and education distributions.

Total Employed Population by Year and Sex (Kenya)



< Manage app

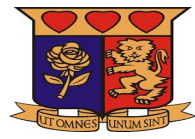
IT Employment Trends by Year and Gender



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# Recommendations, Impact, & Contributions



- **Stakeholder Recommendations:** Recommendations include promoting STEM education, aligning curriculum with industry demands, and implementing diversity initiatives.
- **Potential Impact:** Implementing these recommendations can lead to enhanced youth employability, gender equality, and a more skilled IT workforce.
- **Project Contributions:** The project's contributions encompass comprehensive analysis, an interactive dashboard, actionable recommendations, and data-driven decision-making.



# Thank You!

Any questions?

