**Methodology(Research)**  
Our Research takes a quantitative research design to assess the relationship between unemployment and poverty levels in South Africa. We used a descriptive approach to enable the identification of patterns, trends and relationships using the poverty and unemployment datasets.  
We used the employment dataset(Employment to population ratios(15+)) and poverty dataset(Poverty head count ratio at natural poverty lines for south Africa from the year 1994 – 2023)

**Sampling**  
No sampling was necessary since complete national datasets were available from the World Bank Development Indicators. We applied filtering techniques to extract the relevant country being South Africa from the multi-country data.  
**Data Analysis**  
We cleaned the data by handling missing values and ensuring consistent formats. We used NumPy and Pandas to extract descriptive statistics and conduct correlation analysis. Graphical visualizations were generated using Matplotlib to illustrate trends and relationships.  
**Tools and Techniques**  
We used Python for data manipulation and visualization,, SQLite3 for storage and retrieval of structured data and visual studio for running scripts. We also used GitHub respiratory.  
**Ethical Considerations**

No ethical clearance was needed because our study used publicly available secondary data.  
**Limitations**  
Our study is limited by its reliance on secondary data which could mean that not all socioeconomic factors affecting unemployment and poverty are captured.  
  
**Methodology(Software)**

We followed the Agile development method to ensure flexibility and iterative improvement during the development of the app.  
**System design**

1. Frontend: The user interaction was built using HTML,CSS and JavaScript.
2. Backend: We used Django to handle business logic
3. Database: PostgreSQL used for storing product and user information

**Technologies and tools**  
1. Frontend: HTML, CSS and JavaScript

2. Python(Django framework)

3. Database: PostgreSQL  
4. Version control: GitHub for collaborative code management

**Testing**  
Unit Testing: Built-in testing framework to test models and view  
Integration testing: Verified database connections and API endpoints.  
User Testing: Conducted with other students to assess usabiliyty and interface design

**Limitations**