



Africa Calculate Engine is an Open Source Mathematics Engine and Open Educational Resource. The function is to provide Calculators, Open Textbooks, Scans, Steps and promote OpenStax, Rice University.

Branches

- **Phase:** Alpha, Beta, Gamma, Delta
- **Release Cycle:** Development, Test, Release Candidate, Stable Release

Database

- **Flutter Material Library:** Data Cell, Data Column, Data Row, Data Table, Data Table Source, Data Table Theme, Data Table Theme Data

Dependency Graph

- **Dart:** Google Remote Procedure Calls, Hypertext Transfer Protocol, Protocol Buffers, Shelf
- **Flutter:** Animations, Camera, Dynamic Layouts, Flutter Adaptive Scaffold, Flutter Test, Go Router, Integration Test, Uniform Resource Locator Launcher, Web View Flutter
- **Go:** Google Remote Procedure Calls, Net, Protocol Buffers
- **Material Design Components:** Adaptive Breakpoints, Adaptive Components, Adaptive Navigation

Development Environment

- **Deployment:** Docker, Minikube, Skaffold
- **Framework:** Flutter
- **Integrated Development Environments:** Android Studio, JetBrains Fleet, Visual Studio Code
- **Languages:** Dart, Go
- **License:** Berkeley Software Distribution 3 - Clause License
- **Version Control:** GitHub - <https://github.com/AfricaTechnologies>

Features

- **Calculators:** Algebra, Basic, Calculus, Lists, Matrices, Scans, Statistics, Steps, Trigonometry
- **Open Textbooks:** Algebra and Trigonometry Second Edition, Calculus Volumes 1 - 3, Pre - Algebra Second Edition, Statistics

Material Design Components

- **Flutter Material Library:** Card, Navigation Drawer, Navigation Rail, Stepper, Tab Bar

Responsive User Interface

- **Flutter Widgets Library:** Aspect Ratio, Custom Single Child Layout, Custom Multi Child Layout, Fitted Box, Fractionally Sized Box, Layout Builder, Media Query, Media Query Data, Orientation Builder

State Management

- ***Flutter Widgets Library:*** Animated Builder, Callback Action, Callback Shortcut, Change Notifier, Future Builder, Inherited Model, Inherited Notifier, Inherited Theme, Inherited Widget, Notification Listener, Set State, Stateful Builder, Stateful Widget, Stateless Widget, Stream Builder, Stream Builder Base, Tween Animation Builder, Value Listenable Builder, Value Notifier