

Backgrounder





Minat Wisata Pendakian Gunung Tahun 2024 Diprediksi Naik 3 Kali Lipat

meningkat tiga kali lipat pada 2024.

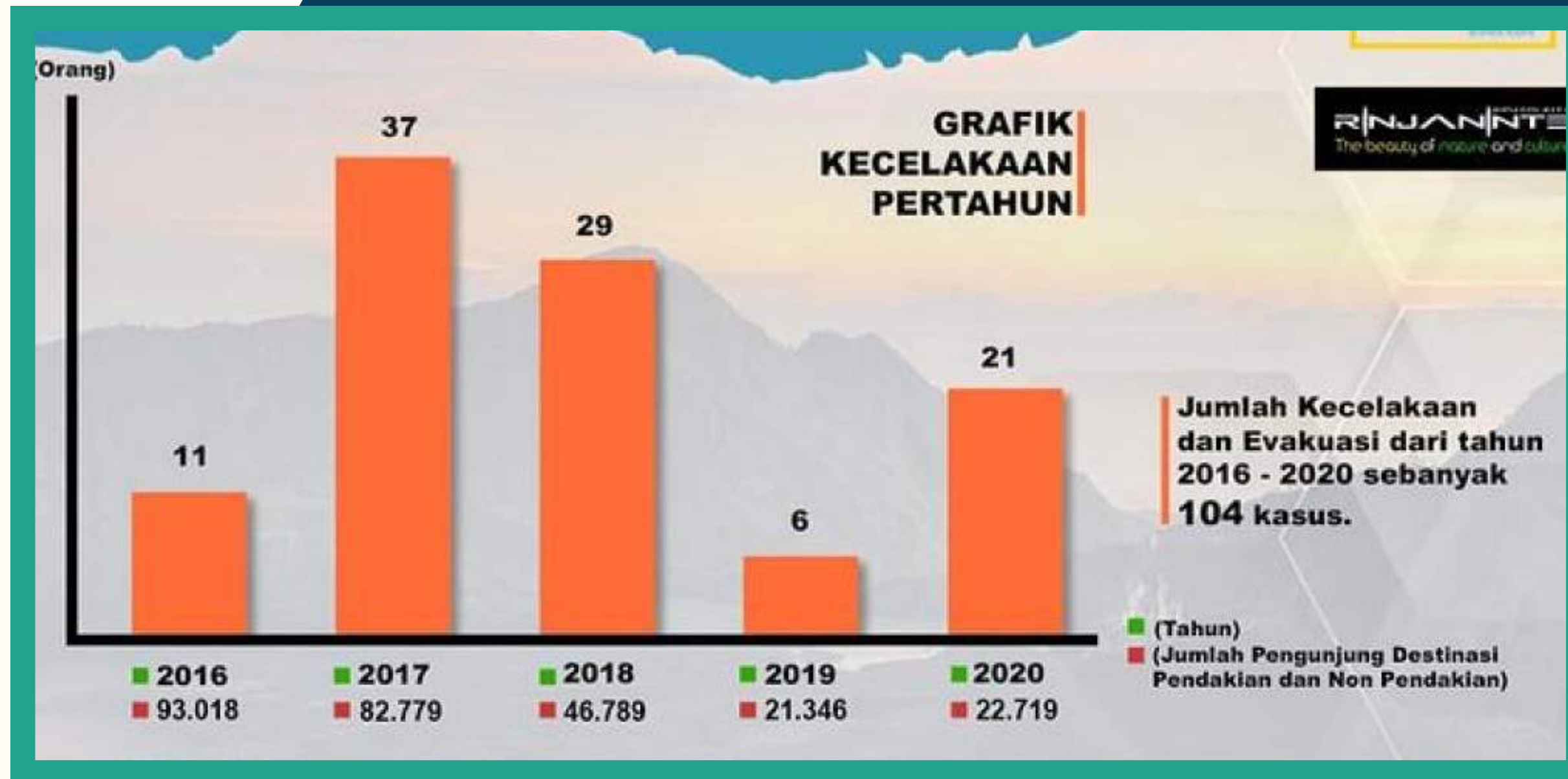
"Tahun depan diperkirakan totalnya (peminat naik gunung) bisa meningkat 3 kali lipat," kata Rahman dalam program The Weekly Brief with Sandi Uno di Gedung Sapta Pesona, Senin (18/9/2023).

Forbes

FORBES > LIFESTYLE > TRAVEL

Backpacking Continues Its Surge In Popularity

INCREASING POPULARITY OF HIKING



Based on the accident chart data in Gunung Rinjani National Park, from 2016-2020 the number of accidents and evacuations that have been carried out is 104 cases. The highest number of accident and evacuation cases in Gunung Rinjani National Park occurred in 2017 with 37 cases with 82,779 visitors, and the lowest occurred in 2019 with 6 accident and evacuation cases with 21,346 visitors.





According to BASARNAS written on travel.kompas.com, victims of mountain climbing accidents in Indonesia have increased in the last 4 years from 2015 to 2017, in 2015 there were at least 12 mountain climbing accidents and the biggest cause was climbers who experienced physical fatigue. In 2016 there were at least 15 mountain climbing accidents. In 2017 there were 15 mountain climbing accidents, in that year 7 people were found dead, 5 were found injured, and 3 people were found healthy. In 2018 there were 23 incidents where 6 climbers were declared dead 4 climbers were declared missing, 7 climbers were declared injured and 592 climbers were declared healthy (Kompas.com, 2019).





Survey Aplikasi "Hike Wise"

Halo para pendaki pemula! 🧗

Kami dari tim Capstone Bangkit Academy (CH2-PS168) sedang mengembangkan sebuah aplikasi persiapan naik gunung. Aplikasi ini bertujuan untuk membantu para pendaki pemula dalam mempersiapkan diri untuk mendaki gunung.

Untuk memastikan bahwa aplikasi ini sesuai dengan kebutuhan para pendaki pemula, kami membutuhkan bantuan Anda untuk mengisi kuesioner validasi. Kuesioner ini hanya membutuhkan waktu sekitar 3 menit untuk diisi.

Aplikasi HikeWise : bit.ly/AplikasiHikeWise

Terima kasih atas partisipasi kamu dalam mengisi kuesioner ini.

Hasilnya akan sangat membantu kami dalam mengembangkan aplikasi ini.

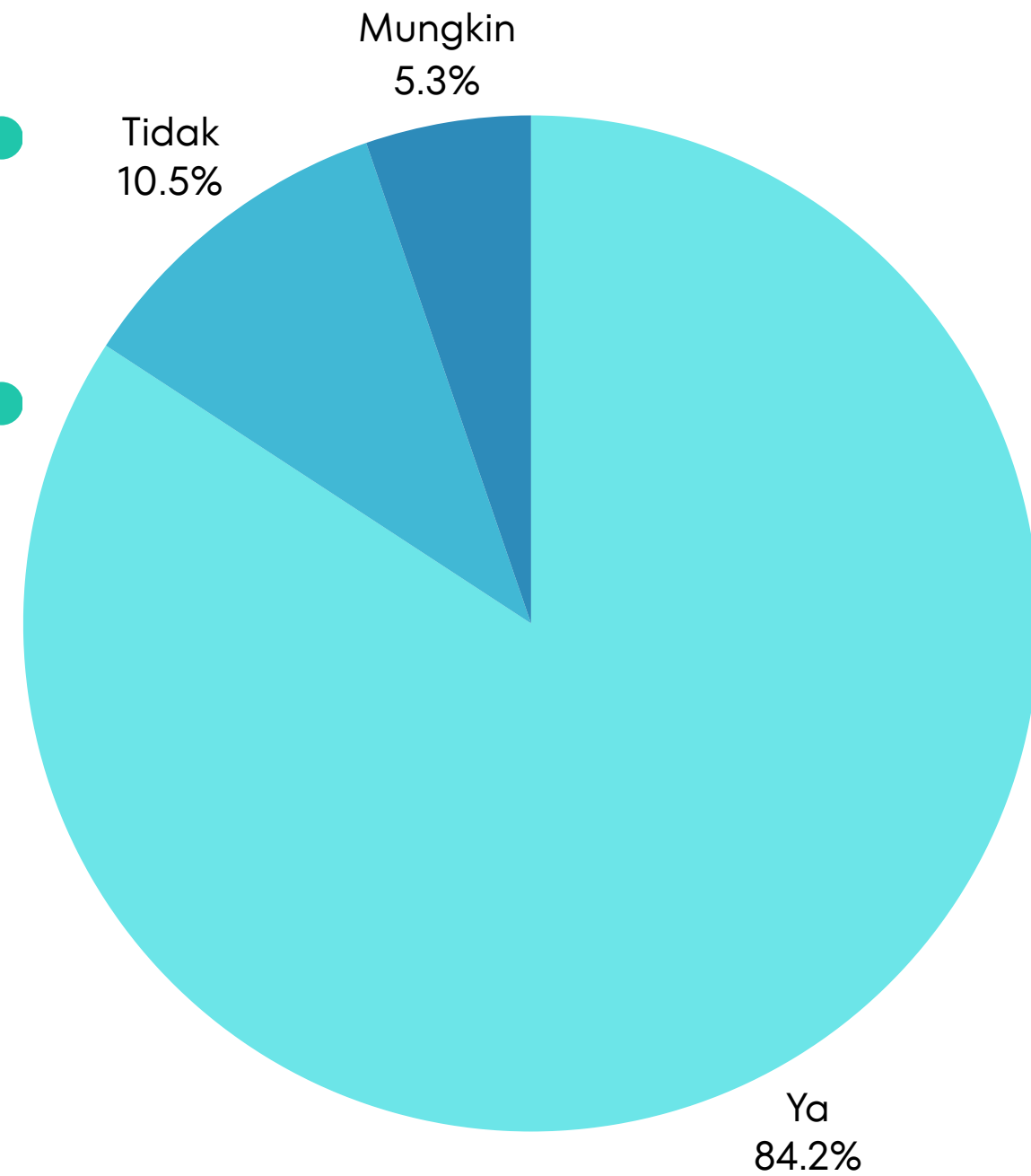
Terima kasih dengan kebutuhan para pendaki. 🌟

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User Survey Results

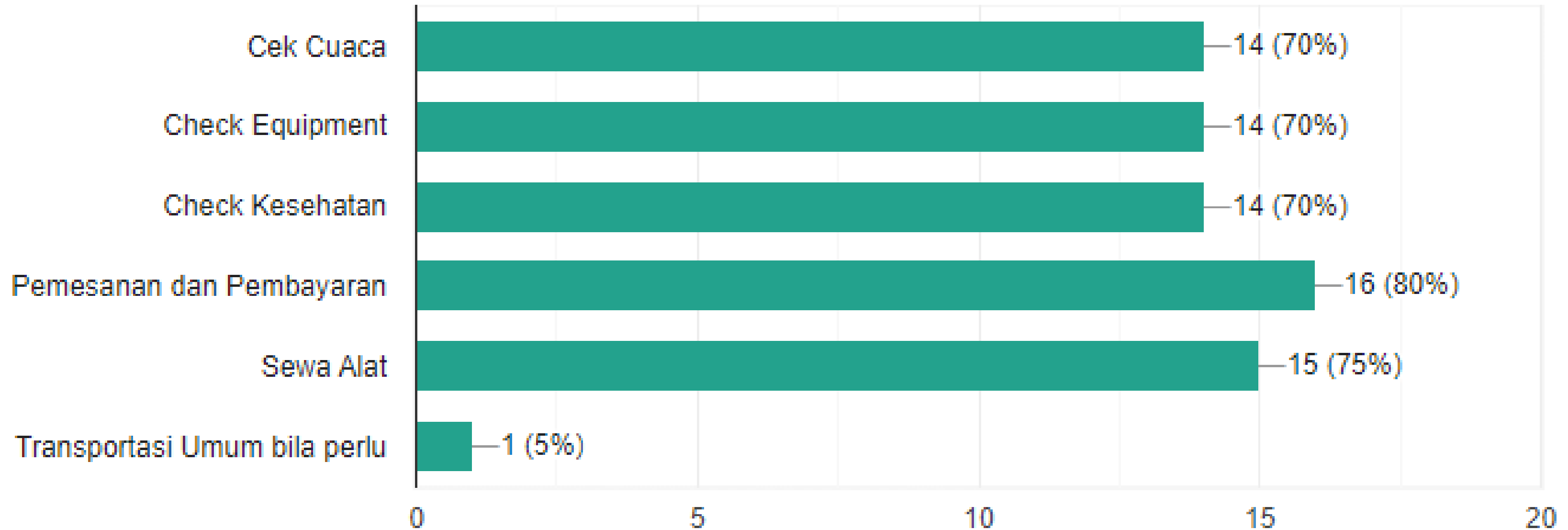
Our team surveyed users around the age of 15-25 who have climbed several times to assess the need for a comprehensive climbing preparation app.



84.2%

Climbers who feel there is a need
for an app that can help with
mountain preparation





Feature Suggestions from users

CH2-PS168 Team

Nadhifah Nur Annisa Reska



ML Team

M283BSX1053

Muhammad Akbar Kasyfurrahman



ML Team

M301BSY0525

Rifqi Ilham Taufik



ML Team

M301BSY0527

CH2-PS168 Team

Muhammad Raihan Widagdo



CC Team

C283BSY3586

Armeisa Ahda Maulida



CC Team

C120BSX4313

CH2-PS168 Team

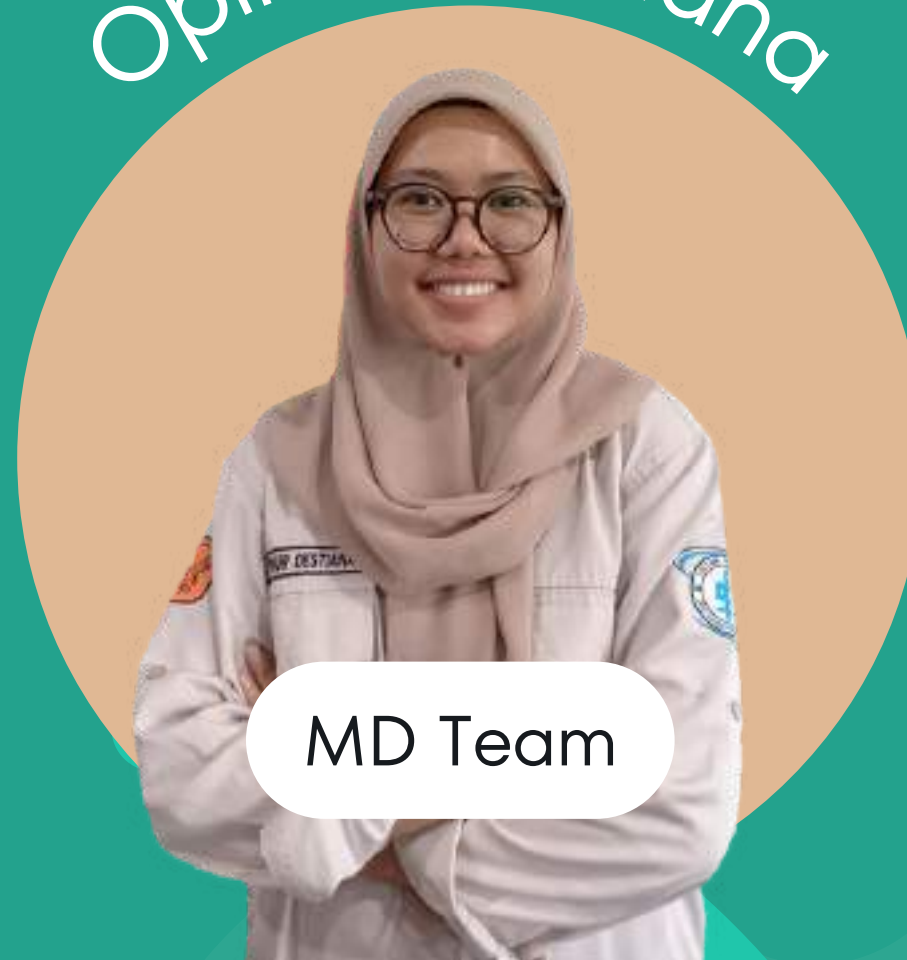
Luthfi Adilal Mahbub



MD Team

A301BSY2243

Opinur Destiana



MD Team

A226BSX2598

Hike *Wise*



Reason



Why did we choose the theme and such a problem statement?

- **Concern for the Safety of Climbers:**

- a. We have a deep concern for the safety of mountain climbers.
- b. Recognizing the high risk of accidents due to lack of preparation before climbing.

- **Awareness and Prevention Objective:**

- a. Choosing this theme in the hope of raising awareness of the importance of good preparation before climbing.
- b. Aiming to reduce the risk of accidents through a preventive approach.

- **Technology Solutions and Development:**

- a. Interested in solution seeking and technology development.
- b. Focus on improving climbers' preparation, including proper gear and health monitoring during climbs.

What kind of problems do we want to tackle?

- **Our Focus:**

- a. Realizing that lack of preparation can be fatal, especially since mountaineering involves hours to days of travel.
- b. Aiming to find solutions and develop technologies that can improve the preparation and safety of climbers.
- c. Raise awareness of the risk of accidents and the importance of good preparation before climbing.
- d. Interested in innovative developments that can help address these issues, both in terms of equipment and health monitoring during the climb.

Existing Result

There are two previous studies that serve as a guide in solving similar problems



First Research

Title

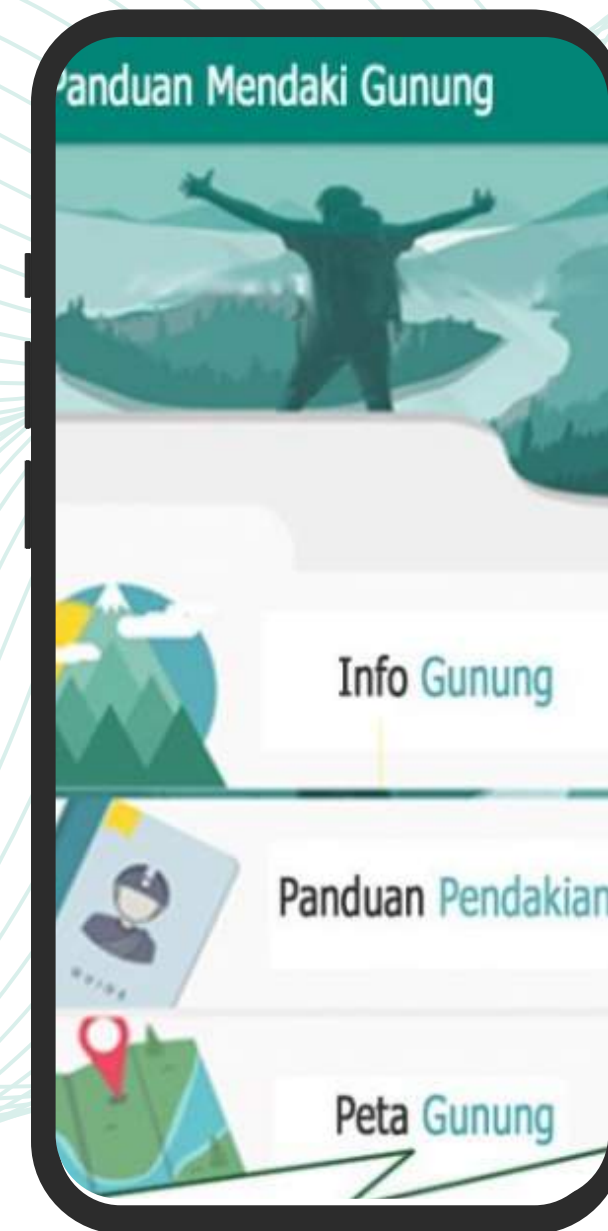
Aplikasi Panduan Mendaki Gunung Berbasis Android (2022)

Application Purpose

As a medium of information for mountain climbers, in order to have knowledge so that the climbing process will be fun, healthy, and safe.

App Features

Has 8 features : Info Gunung, Panduan Pendakian, Peta Gunung, Kompas, Survival, P3K Praktis, Kumpulan Tips dan Tentang Aplikasi.



Second Research

Title

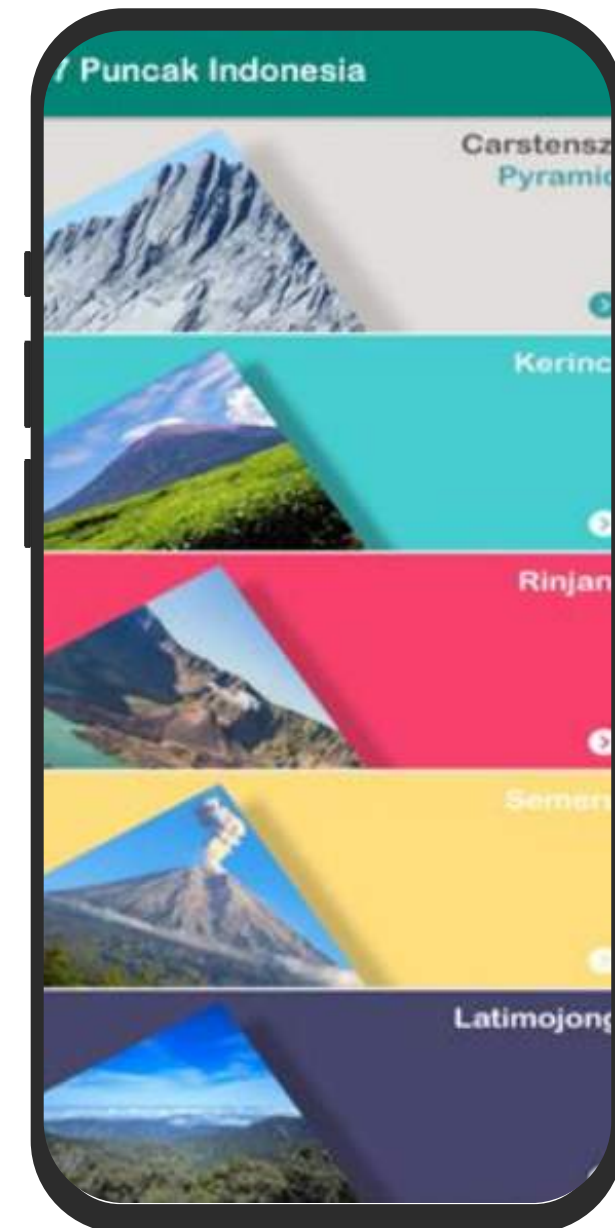
Aplikasi Rute Tujuh Puncak Gunung Indonesia Berbasis Mobile (2021)

Application Purpose

Provide information on hiking routes, directions directions, visiting points they can stop at, and the distance to reach the summit as well as the estimated walking time.

App Features

Has 4 features : Panduan Pendakian, 7 Puncak Indonesia, Info, Tentang



Difference between Previous Research and HikeWise App

Previous Research

- Display only important information
- Only displays information about P3K or health

HikeWise App

- Can display important information as well as up to date articles
- Can perform health checks and equipment checks
- There are new features: Weather Check, Hiking Booking, Trip Booking, and Equipment Booking.

Implementation/Improvement and Reasoning

Explains improvements before making the application and implementing the tools used by the team to make the application



Improvement Before Making the Application

Before creating an application, the team makes designs and improvements, namely analytical research, setting goals and objectives, creating architectural design, prototypes, UI/UX design, determining the technology or tools used for application development per part of the team, concept testing, project management by the entire team , and performance measurement.

Implementation of Tools

Machine Learning

- Python
- Tensorflow
- FastAPI
- Docker

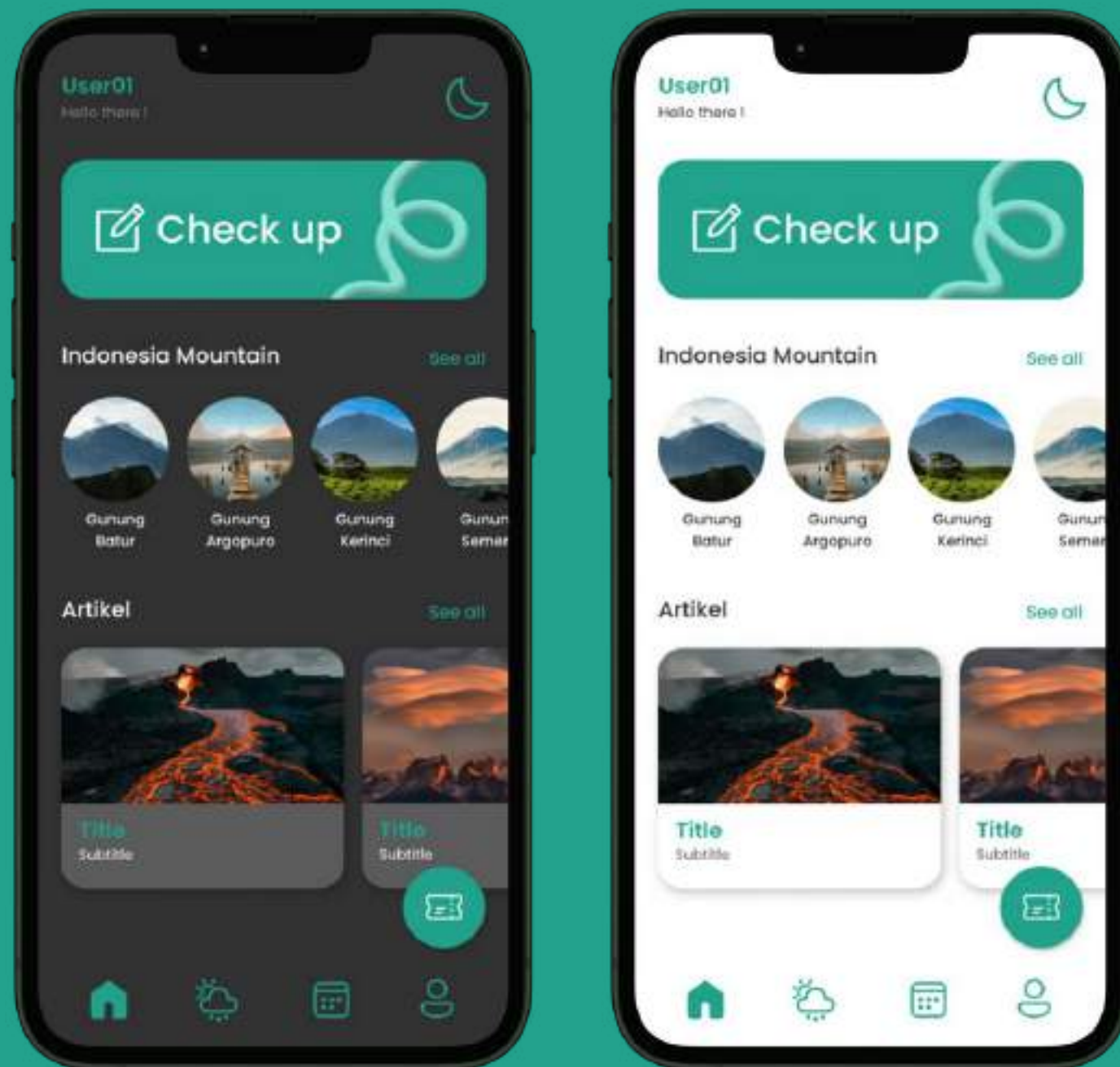
Mobile Development

- Android Studio
- Material3
- Retrofit
- ViewModel
- Firebase
- Coroutines
- LiveData
- Glide

Cloud Computing

- DB Diagram
- Cloud SQL
- phpMyAdmin
- Cloud Run
- VS Code





PRODUCT DEMO

Result & Documentation

DOCUMENTATION

Mobile App

For the mobile app we use android studio and kotlin programming language, and for the interface we use 100% xml code and refer to Material Design.

XML

100%

Kotlin

100%

Language

XML & Kotlin

Font

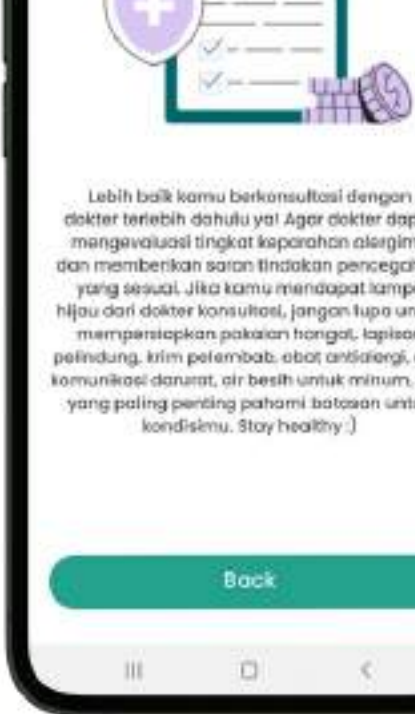
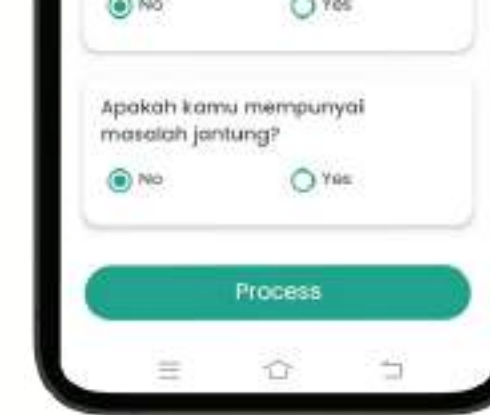
Poppins

Color

LightSeaGreen

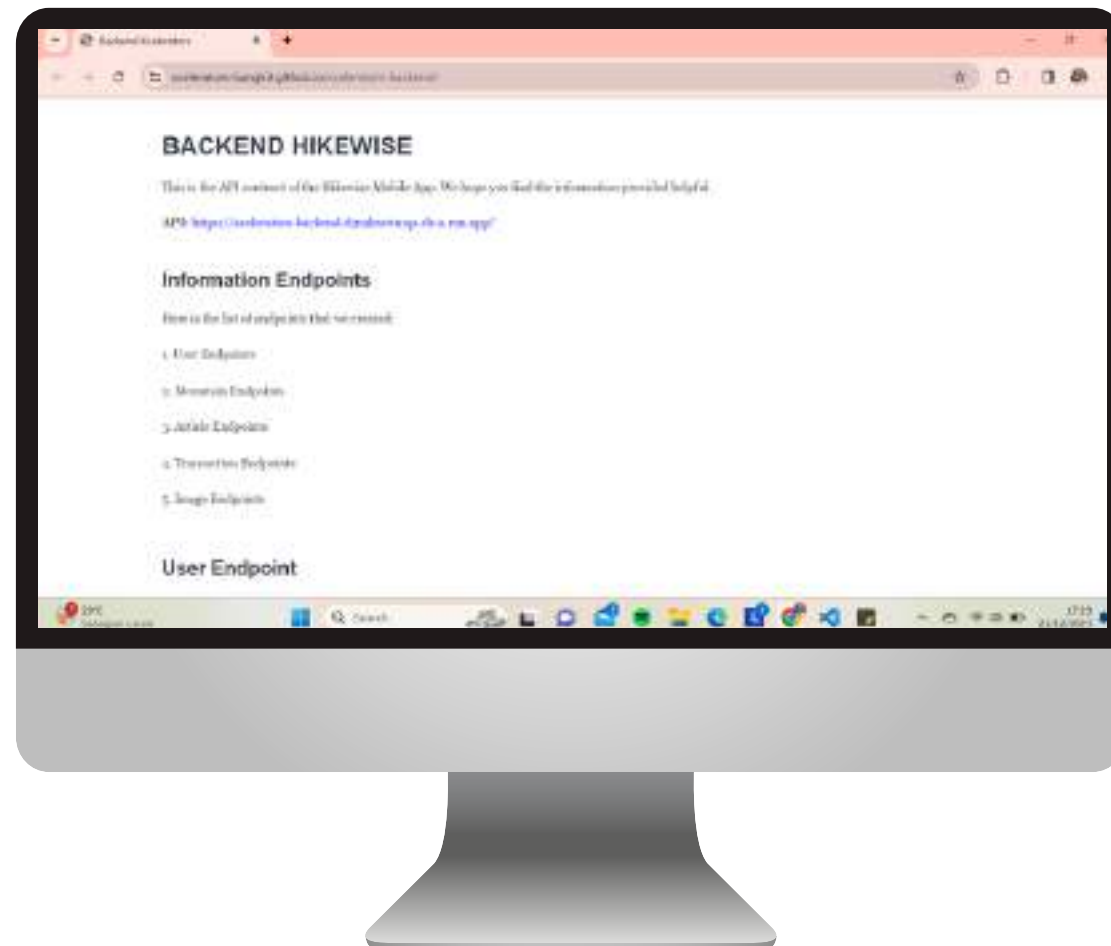
Layouting

Figma &
Material Design



DOCUMENTATION

Cloud Computing

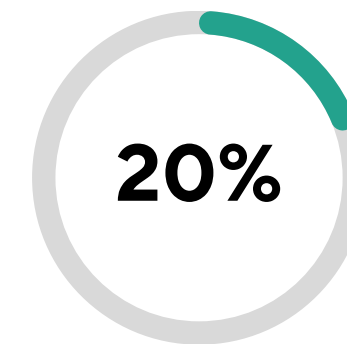


The cloud computing team does its job, namely creating APIs using Visual Studio Code with the Java Script programming language and a little HTML markup, then deploying to Google Run, besides that we also create a database.

Java Script



HTML



Machine Learning

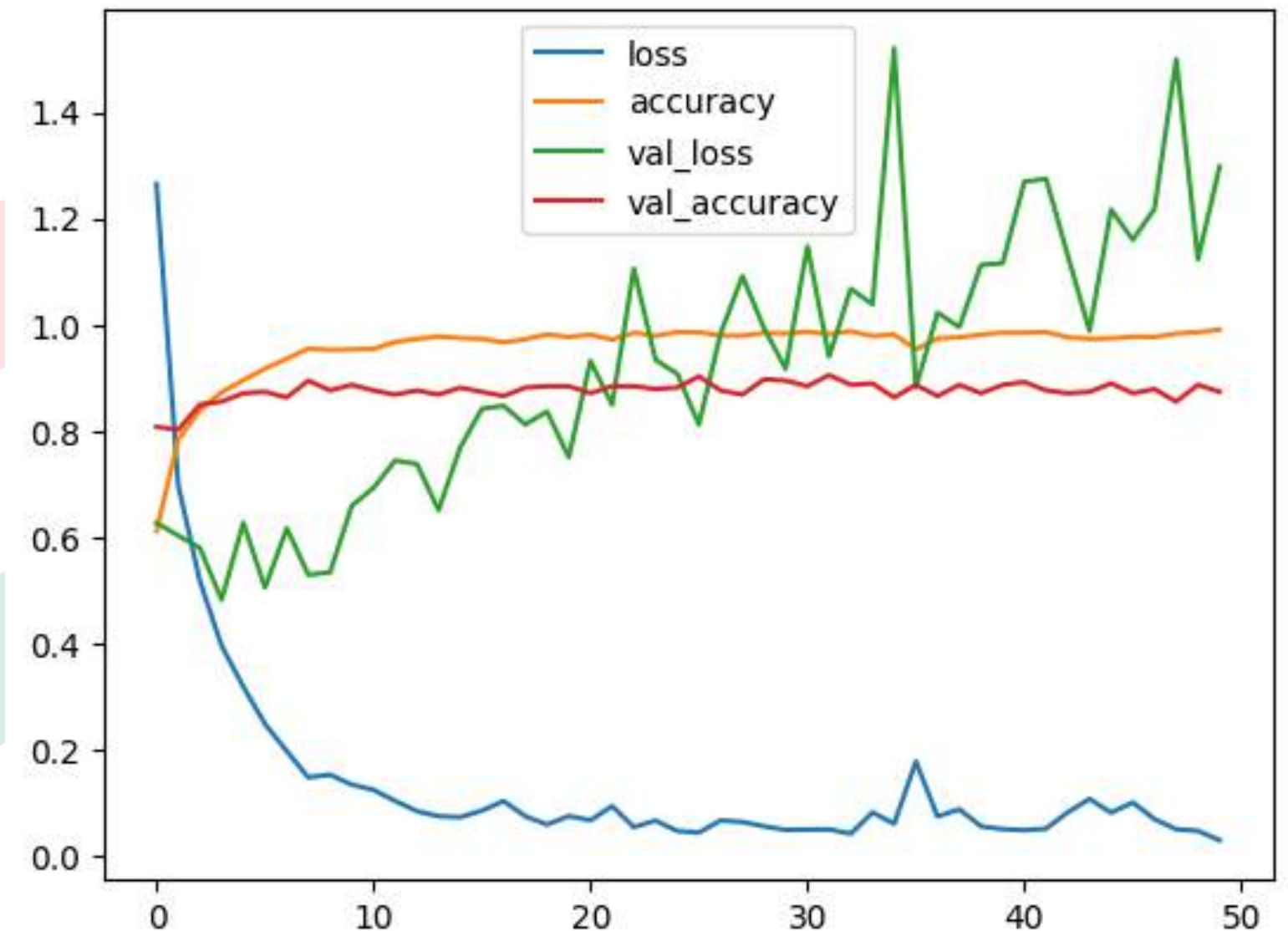
The model training process employs Python, Tensorflow, FastAPI, and Docker. The dataset is downloaded, pre-processed by separating it into training, validation, and test sets, and images are rescaled to a target size of 224px. The training utilizes the pre-trained Xception model as a base, supplemented with a custom model featuring a 2D Convolutional layer, MaxPooling, and 2 Neural Layers. This model is then used for predicting equipment classes. Deployment is achieved using Docker, FastAPI, and Cloud Run, covering data preparation, model customization, and deployment with specified technologies.

Python

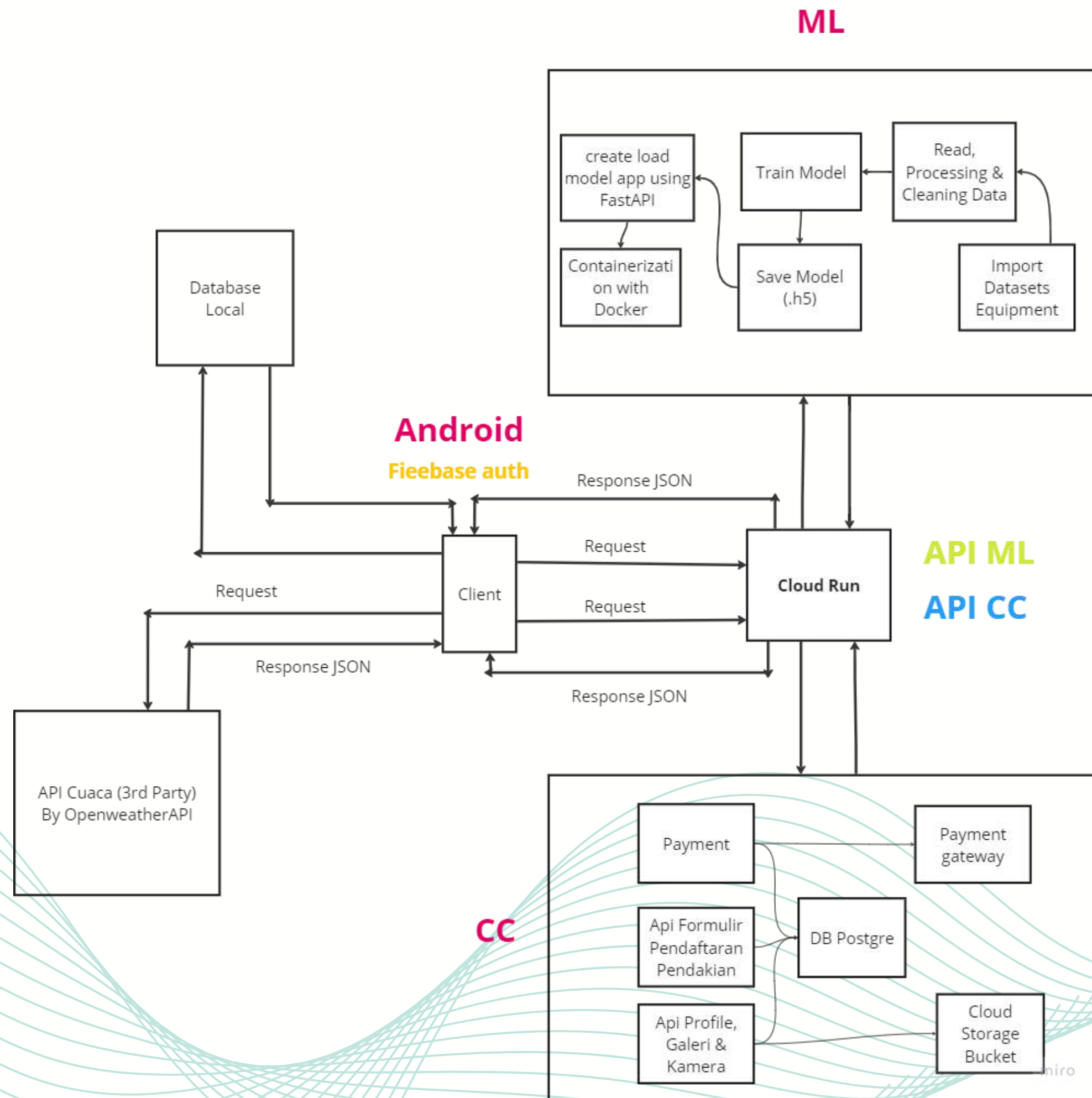
100%

Dockerfile

10%

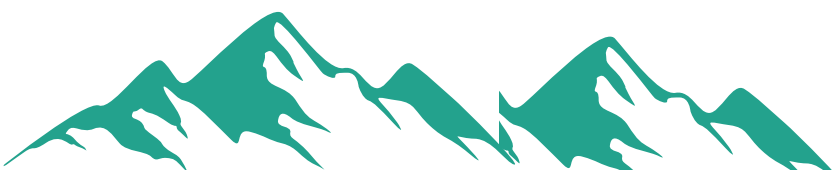


Architecture



Local Deployment Plan

Pilot	Timeline	Budgeting Restriction	Needed Roles
Alpha Release (MVP Features)	December - January	Salaries for developers and marketers, and may require upgrades for cloud services.	App Developers (Mobile Development, Cloud Computing, Machine Learning) Marketing.
Beta Release	June - July	Salary for developers, marketers, and finance. Cloud service upgrade is expected	Project Lead, App Developers, Marketing, Budgeting.



Project Milestone for 2024

1

January

Alpha Release - Conduct needs analysis, Market research, Project planning.

2

March

Customize app features appropriately by considering existing market needs.

3

April

Deploy full-featured applications with marketplaces and update existing data

4

June

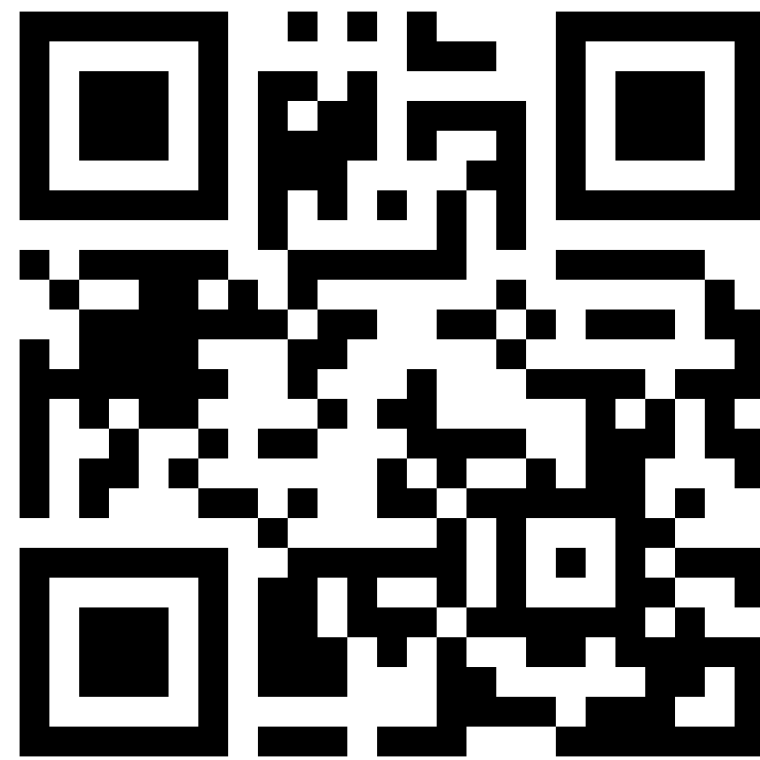
Beta Release - Testing and Refinement better application with fewer bugs and errors

5

July

Collaboration with various partners, added payment gateway

Thank You



<https://s.klas.or.id/75e>

Try On Our Application