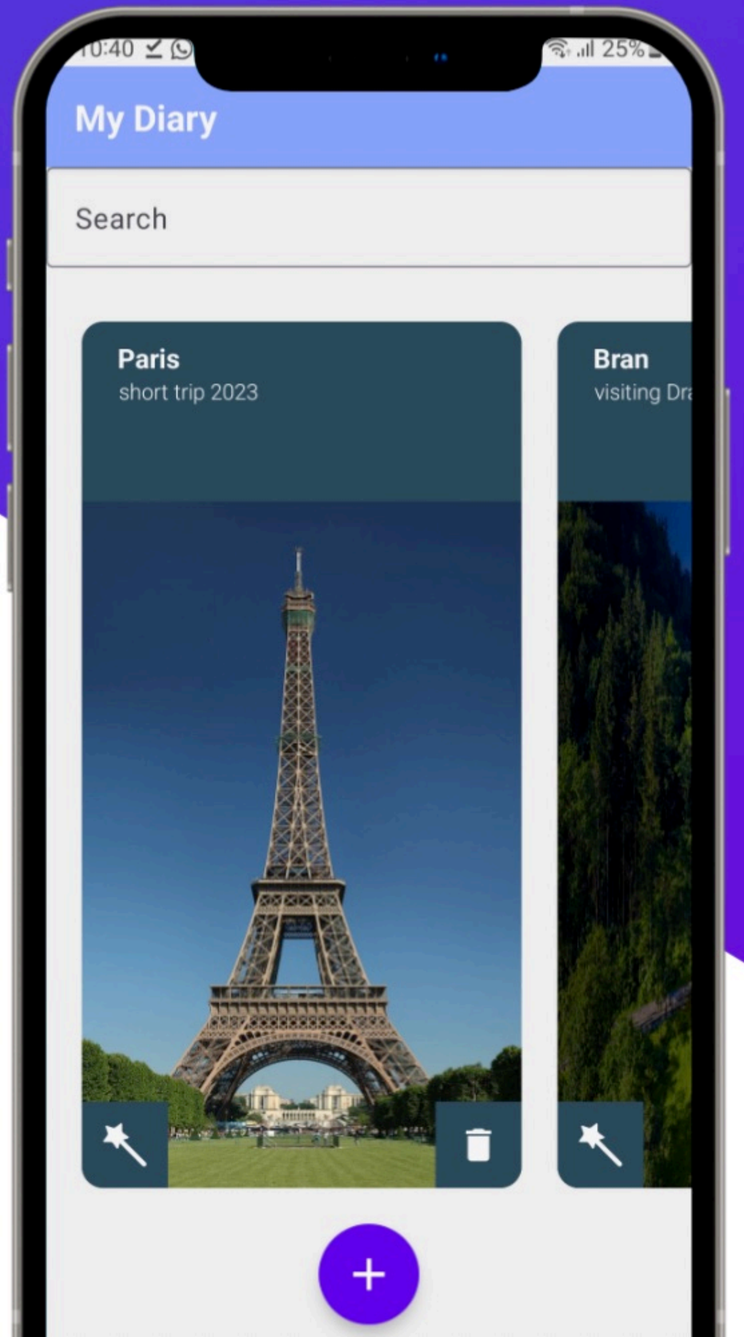
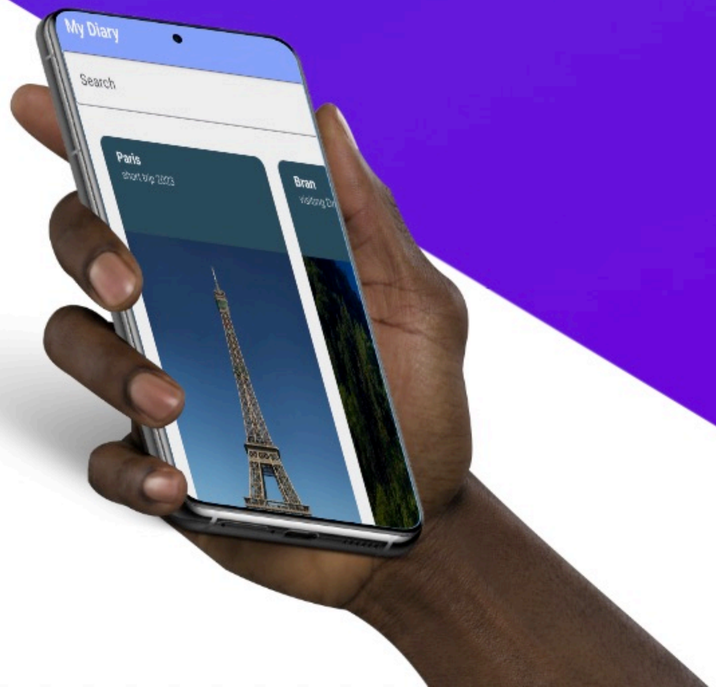
Welcome to DigitalDiary

The tool you surely missed on all your trips.



Stop wasting precious time on your phone when travelling!

- all-in-one app
- easy to use
- nice design
- using powerful Computer Vision API
- caching information - available everywhere, at any time
- gain information about what you visit
- find your way towards important landmarks
- create short multimedia presentations from what you captured



All-in-one App

Capture Pictures.

Capture Videos.

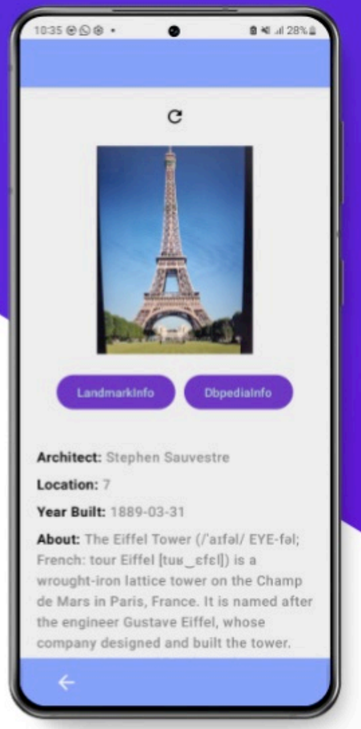
Record voice memories.

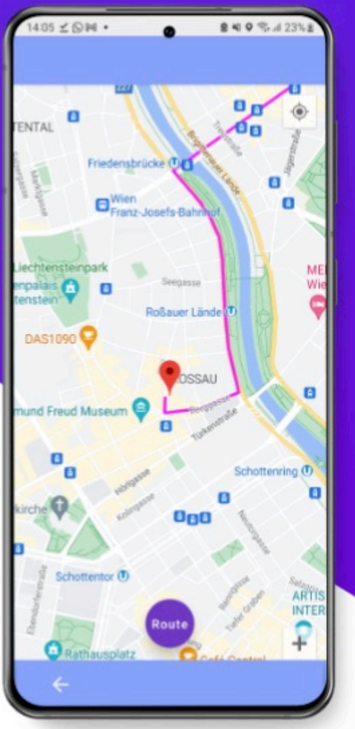
Discover landmarks.

Gather information about landmarks.

Explore the closest nearby locations.

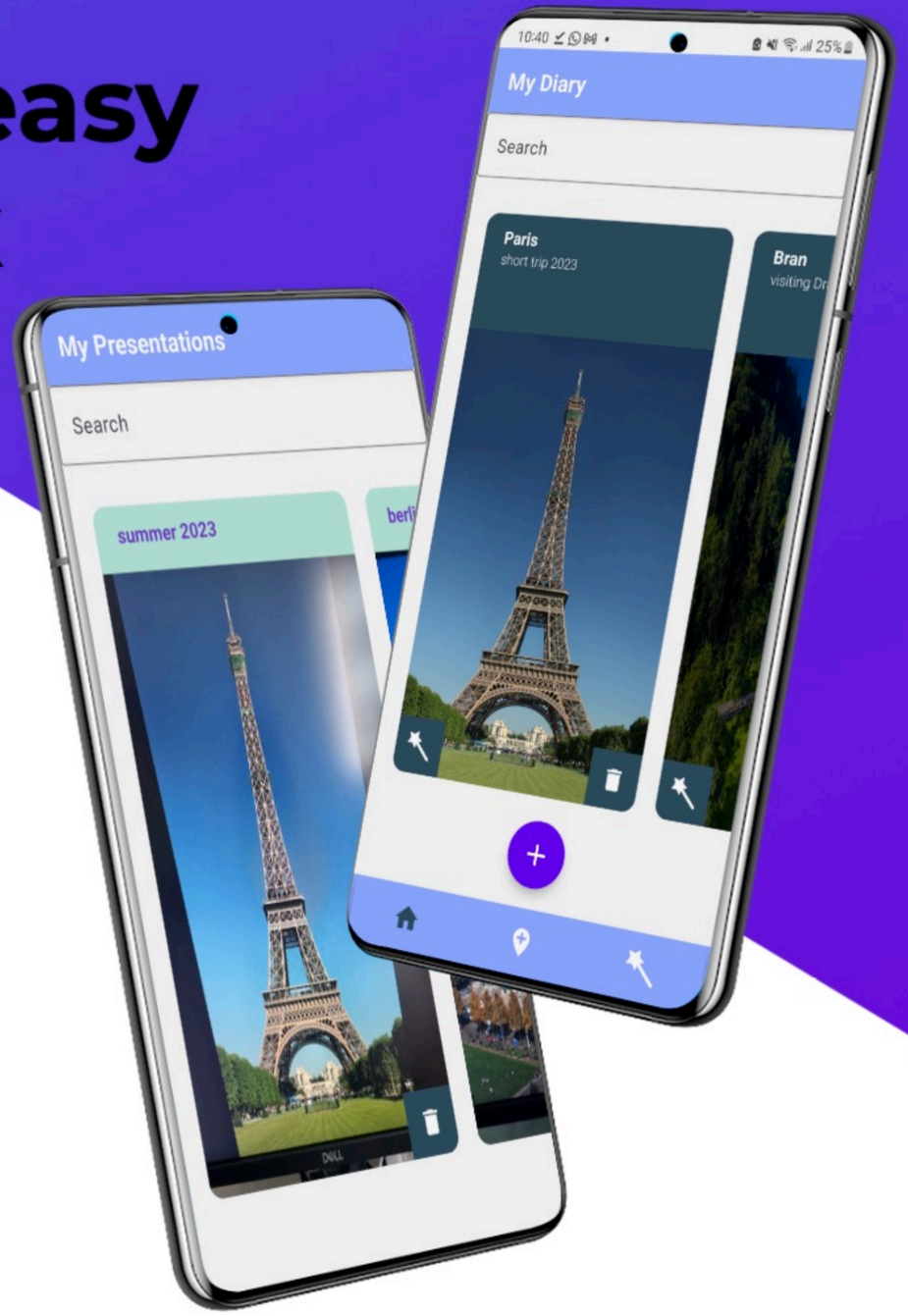
Create summaries of your trips.





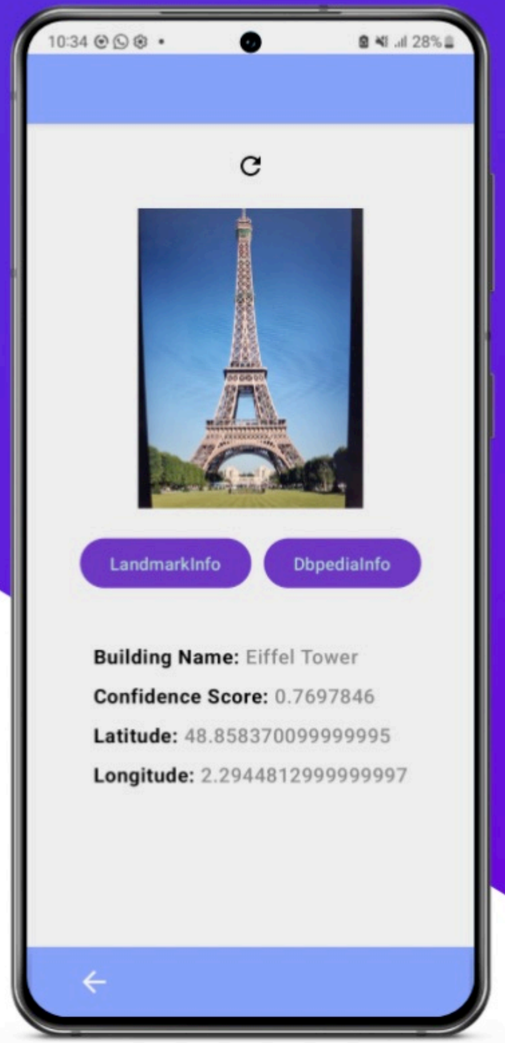
Cheerful, modern and easy to use UI using Jetpack Compose

- intuitive UI
- simple color scheme



Google Vision API for Landmark Recognition

- GoogleOAuth: Access Token, Refresh Token, Bearer Token
- Uploading image to Firebase Storage: google storage (gs) URI
- Google Vision API: using Bearer Token + gs URI, popular landmark is identified
- once identified, information is cached



On cloud vs on device image classification

On-device Image Classification - My first approach

pros:

- improved UX
- little to no latency
- privacy
- offline access
- free
- multiple available models ready to be used

cons:

- for good quality results, models become very large
- mobiles have less resources than computers
- a lot of models online don't perform well
- creating and training a model are tedious tasks

Image Source: https://github.com/tensorflow/examples/tree/master/lite/examples/image_classification/android

On cloud vs on device image classification

On-cloud Image Classification - My final approach

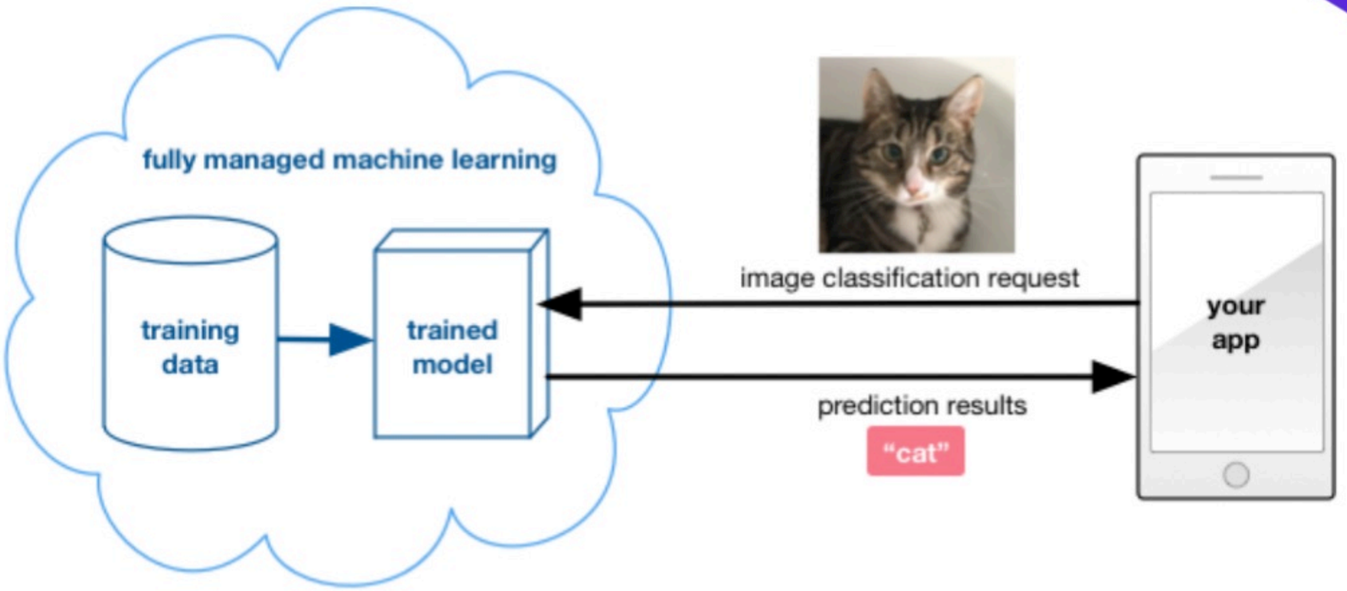


Image Source: https://machinethink.net/blog/machine-learning-device-or-cloud/

pros:

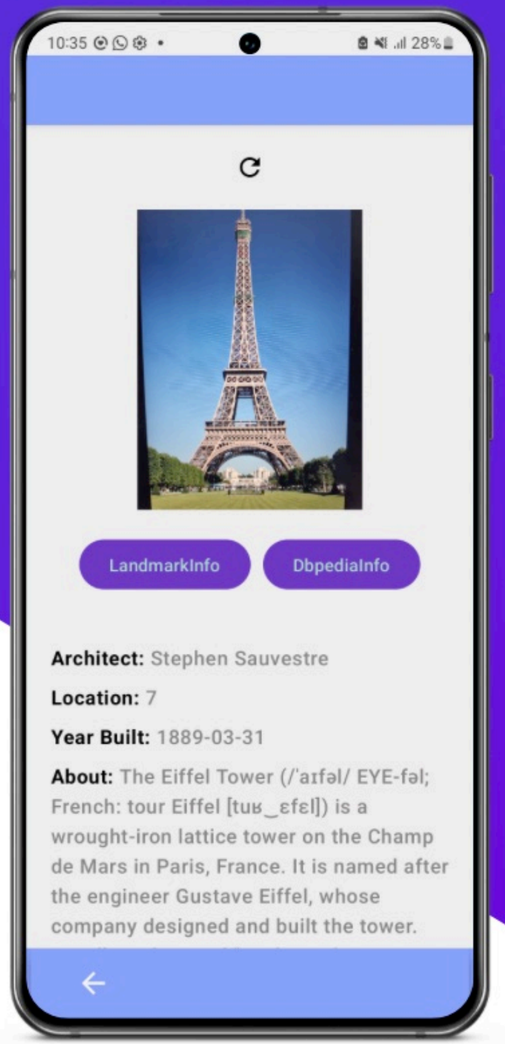
- high accuracy
- sometimes the available models are exactly what you need
- low effort from the user
- no specific skills required

cons:

- low privacy
- low reliability
- high costs
- short delay between request and result
- working with already trained models, so not good for unique tasks

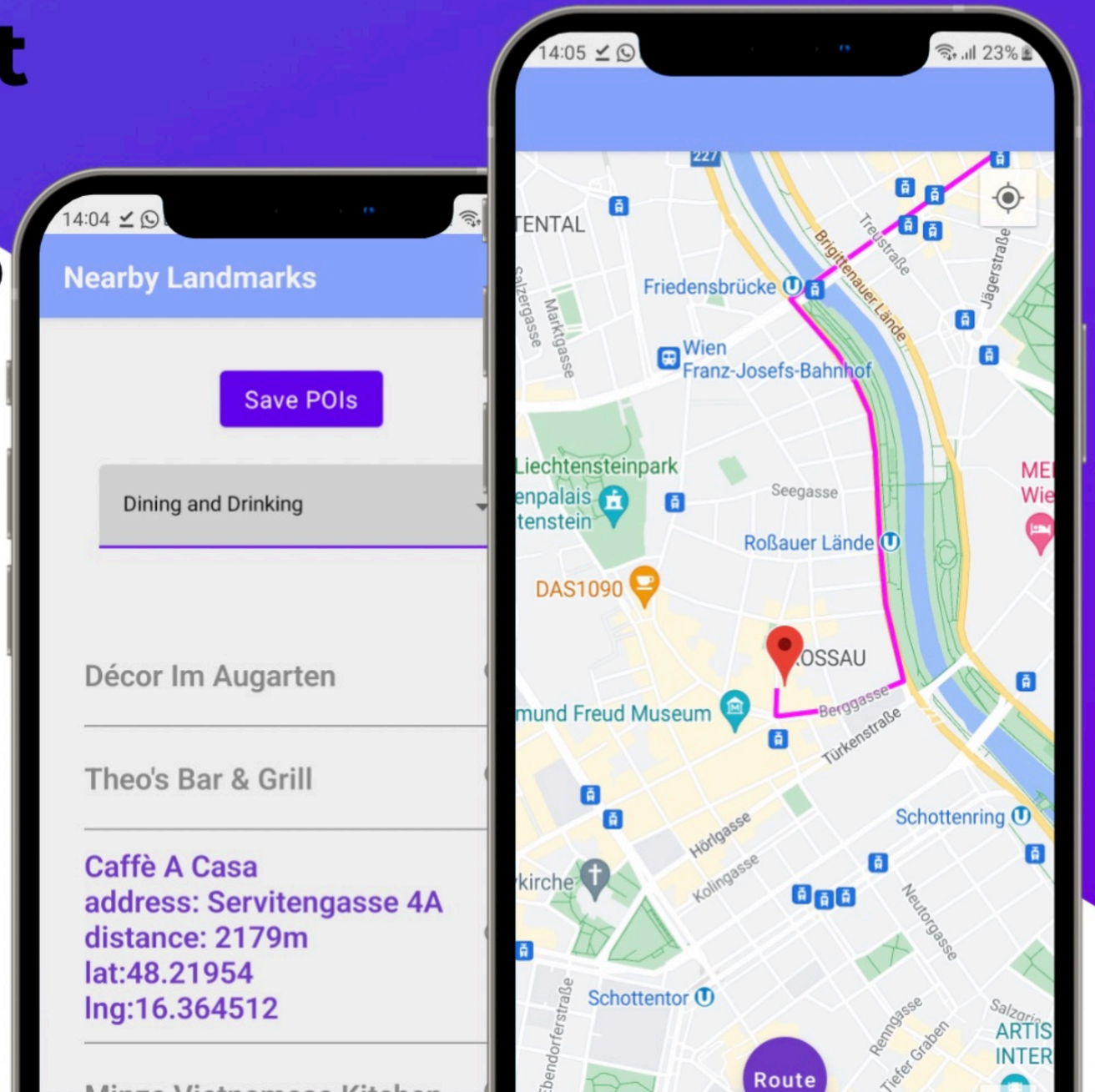
Gathering information about identified landmark

- click on DBpediainfo button: DBpedia query
- if nothing found, WikiMedia query
- once retrieved, information is cached



Discover the closest nearby points of interest and how to get there

- discover 4 categories of nearby landmarks including: Landmarks & Outdoors, Arts & Entertainment, Dining & Drinking and Travel & Transportation
- get the route towards landmarks with the help of Google Directions API



Create a short presentation to sum up your dearest memories

- create a short Instagram Reel-like movie
- browse through the medias