

IMT 542 SURF



An Integrated Surfing
Information Platform

SITONG LIU

MAP



INFORMATION STORY

User story

we want to know the location of the surf spots, and best seasons, water temperature to know whether wetsuits are needed or not, wave type and so on when we are exploring a new spot and planning a surf trip.

Right now, all this information is scattered across the internet, requiring surfers to search multiple sources on their own.



INFORMATION STORY

Scope

we will cover:

- Surf spot info
- Filters
- user contributions

Will not cover:

- Live wave forecast/weather forecast
- Nearby attractions



EXISTING INFO STRUCTURE

SOURCE	HAS INFO ABOUT	DATA FORMAT	HOW IT'S ACCESSED
Google Earth Engine	Sea surface temperature	JSON	API
Surf spot list + location	To list the spots and indicate their locations	JSON	Manually researched and entered into our database
Comments / blogs	Best season, wave type, skill level, nearby amenities etc.	HTML	Web scraping and manual curation
Tripadvisor	Housing	JSON	API



NEW INFORMATION STRUCTURE:

SURF MAP!



NEW INFORMATION STRUCTURE:

Surf spots and locations: Manually collected and verified from multiple web sources and forums.

Water temperature: real-time sea surface temperature is obtained via a custom API that queries the Google Earth Engine using the coordinates and selected date.

Best Season & Wave Type & Skill Level: Web scraped and manually cleaned.

```
2  {
3    "id": "uluwatu",
4    "name": "Uluwatu",
5    "lat": -8.829,
6    "lng": 115.087,
7    "summary": "Powerful reef break in Bali.",
8    "details": "Best during dry season. Strong currents and sharp reef."
9  },
10 {
11   "id": "medewi",
12   "name": "Madewi",
13   "lat": 3,
14   "lng": 106,
15   "summary": "Medewi is home to one of the longest and most mellow left-hand point breaks in Bali.",
16   "details": "Best during dry season. Perfect for beginner to intermediate surfers."
17 },
18 {
19   "id": "mavericks",
20   "name": "Mavericks",
21   "lat": 37.494,
22   "lng": -122.496,
23   "summary": "Big wave spot in California.",
24   "details": "Cold water. Massive waves in winter. For experienced surfers."
25 },
26 {
27   "id": "pipeline",
28   "name": "Pipeline",
29   "lat": 21.665,
30   "lng": -158.05,
31   "summary": "Famous wave on Oahu's North Shore.",
32   "details": "Heavy, barreling reef break. Advanced only."
33 },
34 {
35   "id": "jeffreysbay",
36   "name": "Jeffreys Bay",
37   "lat": -34.05,
38   "lng": 24.92,
39   "summary": "Legendary point break in South Africa.",
```

Madewi

Summary: Madewi is home to one of the longest and most mellow left-hand point breaks in Bali.

Details: Soft, long rides perfect for mellow days.

Location: Jembrana, Bali, Indonesia

Coordinates: -8.4301, 114.8473

Water Temperature: 29.22 °C

Best Season: May to September

Wave Type: Left-hand point break

Skill Level: Beginner to Intermediate

Amenities

- showers
- board rentals
- food and drinks
- parking

Transportation

Medewi beach can be reached by car or motor.

Gallery



User Contributions

- :

Leave a tip...

Submit

[← Back to Map](#)

- USER CONTRIBUTIONS
- IMAGES
- AMENITIES & TRANSPORTATION

DATA QUALITY

- **Reliable sources: water temperature, locations**
- **Manual validation required: manual curation and cross-checking**
- **Ongoing maintenance needed: regular updates**
- **Data caveats: exact coordinates of amenities, ocean dynamics**

LIMITATIONS + FUTURE PLANS

- **DEPENDENT ON THIRD-PARTY COOPERATION**
- **HIGH MANUAL EFFORT REQUIRED**
- **COMMUNITY INVOLVEMENT IS ESSENTIAL**

THANK YOU!