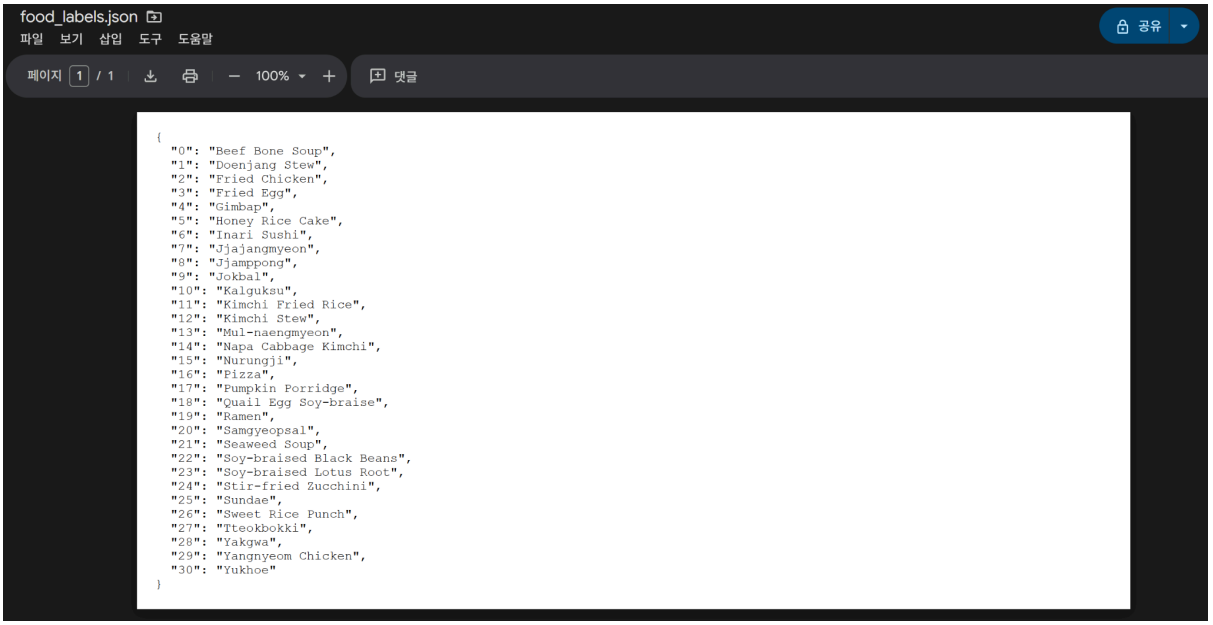
Appendix B

Appendix_B1_food_labels.json

https://drive.google.com/drive/u/3/folders/1BsEpLKr7FObXB2jqxgw2l5prwWADBKB7



{

"0": "Beef Bone Soup",

"1": "Doenjang Stew",

"2": "Fried Chicken",

"3": "Fried Egg",

"4": "Gimbap",

"5": "Honey Rice Cake",

"6": "Inari Sushi",

"7": "Jjajangmyeon",

"8": "Jjamppong",

"9": "Jokbal",

"10": "Kalguksu",

```
  "11": "Kimchi Fried Rice",
  "12": "Kimchi Stew",
  "13": "Mul-naengmyeon",
  "14": "Napa Cabbage Kimchi",
  "15": "Nurungji",
  "16": "Pizza",
  "17": "Pumpkin Porridge",
  "18": "Quail Egg Soy-braise",
  "19": "Ramen",
  "20": "Samgyeopsal",
  "21": "Seaweed Soup",
  "22": "Soy-braised Black Beans",
  "23": "Soy-braised Lotus Root",
  "24": "Stir-fried Zucchini",
  "25": "Sundae",
  "26": "Sweet Rice Punch",
  "27": "Tteokbokki",
  "28": "Yakgwa",
  "29": "Yangnyeom Chicken",
  "30": "Yukhoe"
}
```


Appendix_B2 - 31-Class Selection Rationale

We trained the Mealyze image classifier on a 31-class subset (see Appendix B1: food_labels.json).

This class set was intentionally chosen for an MVP to balance (i) real-world usefulness, (ii) visual diversity,

and (iii) feasible model reliability within limited development time.

1) Real-world frequency (daily exposure)

The selected classes represent foods that commonly appear in Korean daily meals and delivery/cafeteria contexts.

This increases the chance that an uploaded meal photo matches the model's label space and improves practical usability.

2) Visual diversity (coverage of distinct visual patterns)

We intentionally included multiple visual families to reduce "all classes look similar" instability:

- Soup/Stew/Broth-based: Beef Bone Soup, Doenjang Stew, Kimchi Stew, Seaweed Soup

- Noodle dishes: Ramen, Jjajangmyeon, Jjamppong, Kalguksu, Mul-naengmyeon

- Rice-based / single-dish meals: Kimchi Fried Rice, Gimbap, Inari Sushi

- Grilled/fatty meat dishes: Samgyeopsal, Jokbal, Yukhoe

- Fried / crispy texture: Fried Chicken, Yangnyeom Chicken

- Side dishes (banchan) with different textures/colors: Napa Cabbage Kimchi, Soy-braised Black Beans,

  Soy-braised Lotus Root, Quail Egg Soy-braise, Stir-fried Zucchini, Sundae

- Desserts / drinks: Yakgwa, Honey Rice Cake, Sweet Rice Punch

- Cross-cultural "common in campus/delivery": Pizza

This mix helps the classifier learn distinct cues (broth vs noodles vs fried texture vs rice plates, etc.)

rather than overfitting to a single food type.

3) Manageable scope (MVP reliability first)

A 31-class scope is large enough to be useful but small enough to be trainable and testable with higher confidence

under limited time/resources. For foods outside these 31 labels, Mealyze relies on manual override and Food DB lookup

to maintain the service flow, rather than making unsupported recognition claims.

4) Alignment with service design (31-class recognition + 300-food DB)

The classifier is treated as a recognition “entry point” for a frequent subset of foods,

while the 300-item structured Food DB provides nutrition, tags, and safety filtering at the service layer.

This separation reduces hallucination risk and clearly communicates the system’s coverage boundary.