Food Recipe Generator - File Structure

File Structure

```
PROJECT FILE STRUCTURE:
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inversecooking/
|
+-- src/
|   +-- train_large_model.py      # Final training script
|   +-- web_app_large.py          # Main web application
|   +-- train_combined_model.py   # V1 training (deprecated)
|   +-- train_combined_v2.py      # V2 training (deprecated)
|   +-- train_combined_v3.py      # V3 training (deprecated)
|   +-- web_app_combined.py       # Old web app (deprecated)
|   +-- SESSION_NOTES.md          # Project notes
|   +-- generate_pdfs.py          # PDF generator
|   +-- demo.py                   # Original demo
|   +-- modules/                  # Neural network modules
|
+-- data/
|   +-- large_model/              # FINAL MODEL
|   |   +-- best_model.pth        # Trained weights (84.8%)
|   |   +-- class_mapping.json    # Class names
|   |   +-- training_history.json # Training logs
|   |
|   +-- combined_large/           # Training dataset
|   |   +-- train/                # 113,900 images
|   |   +-- val/                  # 20,760 images
|   |   +-- test/                 # Test images
|   |
|   +-- modelbest.ckpt            # Original model
|   +-- ingr_vocab.pkl            # Ingredient vocabulary
|   +-- instr_vocab.pkl           # Instruction vocabulary
|
+-- docs/                         # PDF documentation
|   +-- 01_Project_Overview.pdf
|   +-- 02_Setup_Installation.pdf
|   +-- 03_Training_Commands.pdf
|   +-- 04_Model_Architecture.pdf
|   +-- 05_Web_Application.pdf
|   +-- 06_File_Structure.pdf
|
+-- .venv/                        # Python virtual environment
```

Key Files

Food Recipe Generator - File Structure

KEY FILES EXPLAINED:
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1. web_app_large.py
   - Main application file
   - Contains model definition
   - Recipe database (181 recipes)
   - Gradio interface

2. train_large_model.py
   - Training script for final model
   - Data loading and augmentation
   - 2-phase training logic
   - Model saving

3. best_model.pth
   - Trained model weights
   - 84.8% validation accuracy
   - Contains: model_state_dict, class_to_idx, cuisine_map

4. class_mapping.json
   - Maps class indices to food names
   - 181 entries (0-180)
   - Format: {"indian_biryani": 12, ...}

5. SESSION_NOTES.md
   - Complete project documentation
   - Training history
   - How-to instructions