

SipJoy App - Intelligent Wine Recommendation Through Real-Time Shelf Recognition and Contextual Pairing

Version: 1.0

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Public Disclosure for Prior Art Protection

1. Abstract

The SipJoy App is a mobile-first wine pairing and discovery platform that uses image recognition, contextual prompts, and AI-generated recommendations to help users confidently select wines-either while shopping in-store or pairing at home. Built with OpenAI's GPT and evolving toward integrated voice, checkout, and Spotify pairing support, SipJoy solves the decision fatigue problem in wine aisles by providing curated, sommelier-style suggestions in seconds. This whitepaper constitutes a public disclosure...

2. Problem Statement

Wine selection is overwhelming for most casual consumers. The average grocery store carries 200-500 wines, but there is minimal assistance available at the point of decision. Most apps are either database lookups, barcode scanners, or basic rating aggregators. None offer real-time, context-aware guidance based on what's in front of the shopper, especially not in a single tap or spoken question. There is a missing layer of sommelier intelligence in the everyday wine-buying experience.

3. System Overview

SipJoy operates in two main modes:

- At the Store:

The user takes a photo of a wine shelf. The system reads visible labels, filters them by type and availability, and prompts the user to enter or select a meal type, mood, or occasion.

Example: "I'm having spicy Thai noodles tonight. What works?"

- At Home:

The user selects from suggested meals, home-cooked options, or takeout styles and receives curated wine pairings from previous purchases or hypothetical lists for inspiration or future buying.

Key UX Components:

- Light, French-style sommelier avatar
- Clean tiles: "At Store" and "At Home"
- Automatic progression through pairing flow
- ChatGPT-style guidance with a casual tone

4. Core Innovation

The core innovation lies in the dynamic pairing engine that blends:

- Real-time image recognition of wine labels on shelves
- AI-driven pairing logic via GPT (not rule-based, but contextual and adaptive)
- User prompt flow that adapts based on scenario: in-store vs. at-home pairing
- Personality-driven guidance that removes intimidation and makes wine fun

Additional innovations:

- Future integration with Spotify to enhance mood-based pairing

(e.g., wine + meal + music match)

- Planned native checkout integration so that SipJoy becomes a transactional wine concierge, not just a discovery engine

5. Technology Stack

- GPT-4 (OpenAI) - Natural language understanding and meal-to-wine logic

- Replit - Core orchestration environment and prototype deployment

- Bubble - UI/UX framework for early front-end development

- Firebase or Supabase - Cloud storage and user behavior tracking

- Future: Vision API or custom model - Label recognition from wine shelf photos

- Stripe or Shopify SDK - Planned native checkout flow

- Spotify API - Mood pairing extension (beta planned)

6. Business Use Cases

- Direct-to-Consumer Experience - Fun, intelligent wine selector

- Retail Licensing - Safeway, Whole Foods, Total Wine integration

- Data Analytics for Distributors - Track which wines are selected, why, and when

- Brand Engagement for Wineries - Pay-to-promote pairing positioning in-app

- Voice Concierge Layer - Pairings via smart speakers or phone-based chat

7. Legal Statement (Defensive Publication)

This document constitutes a public disclosure of proprietary innovation in wine pairing, AI application

design, and contextual user guidance. It is published as prior art to establish original invention and to prevent subsequent patent claims on the combination of:

1. Real-time shelf image recognition for wine label filtering
2. GPT-based contextual wine pairing
3. Mood/music-based pairing integration via Spotify
4. Native checkout via Stripe/Shopify embedded flow
5. A user experience designed around sommelier-style guidance

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With AI Research & Drafting Support from Assistant AI

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SipJoy App - "Your wine choice partner-for a meal, for friends, or for a moment with neither."

8. Global Use & Expansion

While the SipJoy App was initially conceived for the U.S. and Canadian grocery and wine retail markets, its core pairing engine, shelf-recognition interface, and voice-based sommelier experience are globally adaptable.

Key target markets for international expansion include:

- France & Italy - Wine tradition meets modern digital pairing
- UK - Large supermarket chains (e.g., Tesco, Sainsbury's) with robust app ecosystems

- Australia & New Zealand - Sophisticated wine cultures with tech-savvy populations
- Japan & South Korea - Early adopters of personalized recommendation engines
- Germany - Strong retail infrastructure and appreciation for food-wine matching
- Singapore & Hong Kong - Compact, high-income markets ideal for smart retail
- China - Rapidly growing interest in wine, mobile-first consumers, and strong e-commerce infrastructure

The app's pairing logic, UX design, and commercial structure can be localized via regional flavor profiles, language translation, and market-specific wine availability datasets.