PetVision: AI-Powered Pet Health Tracking Platform

Product Requirements Document (PRD)

Version: 1.0
Date: December 29, 2025
Status: Ready for Development
Owner: Founder (Solo Build)
AI Stack: Venice.AI APIs + Mistral 3.1 Vision Model

Executive Summary

PetVision is a mobile-first AI health screening app that enables pet owners to detect health issues early by analyzing photos of their pets using advanced vision AI. Veterinarians identified a critical gap: pet owners skip wellness visits and lack tools to monitor chronic conditions between appointments. PetVision fills this gap by providing instant AI-powered health assessments from home, with real-time vet communication and integrated clinic workflows.

Key Market Insights (Vet-Validated)

- **Pain Point 1:** Skin conditions & weight loss are frequently overlooked; owners delay vet visits
- **Pain Point 2:** Education is ineffective without frequent visits; older dogs develop untreated issues
- **Pain Point 3:** Pet owners use phone to send photos/videos but current messaging apps don't analyze content
- **Pain Point 4:** Vets struggle to monitor chronic conditions (diabetes, respiratory) between visits; busy clinics miss messages
- **Opportunity:** Pet owners are ready for a unified tool that combines photo analysis + messaging + health tracking

Financial Projections

- **Target:** 100K families at $50/year = **$5M ARR**
- **MVP Pricing:** $5/month photo analysis; Premium: $10/month (vet messaging + breed tracking)
- **B2B Opportunity:** Pet insurers + vet clinics license data insights

---

Problem Statement

Current State

1. **Pet owners** have no visual diagnostic tools; they guess if symptoms warrant a vet visit
2. **Veterinarians** receive unstructured photo messages via SMS/WhatsApp; no AI analysis, no history tracking
3. **Chronic conditions** (diabetes, respiratory, kidney disease) go unmonitored between appointments
4. **Trust gap:** Owners fear AI is unreliable for health advice; vets need proof of accuracy before recommending

Impact

- Delayed diagnosis = worse prognosis + higher treatment costs (e.g., $1,200+ dental surgeries that could be prevented)
- Vet clinics experience communication friction + inefficient workflows
- Pet insurers can't identify early issues to reduce claims

Root Cause

Existing pet health apps focus on records/appointments, not visual analysis. Medical imaging AI exists (human radiology, oncology) but hasn't been adapted for pet health in a consumer-friendly way.

Product Vision

For anxious pet owners who want professional-grade health screening from home, and veterinarians who want integrated monitoring tools, PetVision is a mobile app that analyzes pet photos with AI to detect early health issues. Unlike existing pet apps that only manage records, PetVision combines real-time visual AI analysis + veterinarian integration + health history tracking to catch problems weeks before traditional methods.

Goals & Objectives

OKRs (12-Month Horizon)

Objective	Key Results
Obj 1: Achieve user adoption & trust	KR1: 10K DAU by month 6; 50K by month 12
	KR2: 4.5+ star rating; <2% support tickets on AI accuracy
	KR3: 80% of users send ≥1 photo/month
Obj 2: Validate vet clinic integration	KR1: 50 pilot vets integrated by month 6
	KR2: 90% vet satisfaction with clinic dashboard
	KR3: 20% of vet referrals come from PetVision users
Obj 3: Build data moat for monetization	KR1: 100K scans in database; 10+ condition patterns identified
	KR2: Pet insurer partnerships signed (2+ pilots)
	KR3: Vet clinics license platform for $500+/month

Target Audience

Primary Users

1. **Pet Owner Persona: "Anxious Alex"**

- **Demographics:** 30–55, female-skewed (pets as family members)
- **Psychographics:** Treats pet like child; researches obsessively; willing to pay for peace of mind
- **Behaviors:** Uses Reddit pet communities (2.8M dog owners); follows vet YouTubers; shares health concerns in Facebook groups
- **Pain Point:** "Is this weird bump serious? Should I spend $300 on a vet visit?"
- **Motivation:** Early detection saves money + prevents pet suffering

2. **Veterinarian Persona: "Busy Dr. Chen"**

- **Demographics:** Licensed veterinarian; 5–15 years experience; independent clinic or small group
- **Workflow:** 30+ patients/day; relies on WhatsApp for owner communication; struggles to track chronic condition progress

- **Pain Point:** "I get unstructured photos via messaging; can't compare over time; owners often miss chronic disease signs"
- **Motivation:** Integrated tool = faster diagnosis + better client communication + data for research

3. **Secondary User: Pet Insurer Claims Manager**

- **Use Case:** Validate early detection insights to reduce claim payouts; identify high-risk conditions
- **Value:** 5–10% reduction in average claims = millions in savings at scale

Addressable Market

- **Total Serviceable Market (TAM):** 70M households in US own pets (63M dogs, 60M cats)
- **Serviceable Obtainable Market (SOM):** 1–2M early-adopter pet owners (anxious, tech-savvy)
- **Initial Target:** 100K users @ $50/year = $5M ARR

Feature Set: MVP → Premium → B2B

MVP (Launch: Month 3, Solo Build)

Tagline: "Professional pet health screening in 30 seconds"

Feature	Description	Venice.AI Tech	Priority
Photo Capture & Upload	In-app guidance for optimal photo angle/lighting	Vision guidelines in UI	MUST
AI Health Scan (Multi-Organ)	Analyze eyes, skin, teeth, gait, ear health using Mistral 3.1 Vision	mistral-31-24b vision model	MUST
Health Report Card	Green/Yellow/Red severity flags + detailed findings + confidence scores	Claude reasoning for report generation	MUST
Condition Detection	Eyes (dry eye, cataracts, glaucoma), Skin (dermatitis, hot spots, parasites), Teeth (tartar, decay), Gait (limping indicators)	Vision model fine-tuning on vet datasets	MUST
Vet Recommendation Logic	Auto-suggest: "Monitor at home" / "Schedule routine visit" / "Seek urgent care"	Mistral reasoning + vet guidelines	MUST
Health History Timeline	Store all scans + trends over 6 months	PostgreSQL + photo storage (S3/Supabase)	MUST
PDF Export	Download report to share with vet or insurance	Report generation	SHOULD

Phase 1 Premium (Month 6: Vet Integration)

Feature	Description	Tech Stack
Vet Messaging (Unified)	Pet owners share scan results directly; vets see AI analysis + owner notes in one place	Real-time messaging + Venice for semantic analysis
Multi-Pet Management	Add multiple pets; track individual health profiles	Relational data model
Breed-Specific Insights	Highlight breed predispositions (e.g., Golden Retrievers prone to hip dysplasia)	Knowledge base + reasoning model
Vet Clinic Dashboard	Vets see their referred patients' scans; export data for patient records	Role-based access + secure vet auth
Chronic Condition Tracking	Templates for diabetes/respiratory/kidney disease monitoring	Templated scan workflows

Phase 2 B2B (Month 9: Enterprise)

Feature	Description
Pet Insurer API	License de-identified scan data; APIs for claim validation
Vet Clinic SaaS	White-label platform for vet clinics to offer to their patients ($500–2K/month)
Research Dataset	Anonymized scans for academic research (early detection patterns)

User Journeys

Journey 1: Pet Owner Uses App (Happy Path)

1. Download app → Create pet profile (name, age, breed, health history)
2. "Concerned about skin rash"
3. Tap "Take Health Scan" → Camera opens with AI guidance overlay
4. Frame eyes → capture → AI processes (5–10 sec)
5. Frame skin area → capture → AI processes
6. AI generates report: "Possible dermatitis (confidence 82%)"
7. Tap "Share with Vet" → Opens messaging interface
8. Owner: "AI flagged this. Can you confirm?" + photo
9. Vet replies: "Looks like allergic reaction. Try this shampoo." with care plan
10. Owner adds follow-up scan in 2 weeks
11. App shows trend: "Improvement detected 45% vs baseline"
12. Owner shares health report with pet insurance for discount

Journey 2: Veterinarian Monitors Patient (Clinic Integration)

1. Vet receives referral: "Alex signed up on PetVision; wants monitoring"
2. Vet accepts → Joins clinic dashboard
3. Patient name: "Fluffy" (diabetic cat)
4. Owner sends weekly diabetes scan (weight + vitals)
5. AI flags: "Weight increased 2% this week" (trend alert)
6. Vet reviews in one interface vs fragmented WhatsApp
7. Vet replies with medication adjustment
8. System sends automated reminder to owner: "Time for follow-up scan"
9. Vet generates quarterly report: "Diabetes controlled; compliance excellent"
10. Report saved to patient file; can export for other vets

Functional Requirements

Core Features

1. Photo Capture Module

- **Acceptance Criteria:**
  - In-app camera with AR overlay guidance ("Move 6 inches from eye," "Ensure good lighting")
  - Support video + still images
  - Store images in secure cloud storage (encrypted, HIPAA-ready)
  - Metadata: timestamp, pet ID, image quality score
- **Tech:** React Native Camera, Venice.AI for image validation
- **Owner:** Solo (Windsurf/Cursor for rapid dev)

2. Venice.AI Vision Analysis Engine

- **Acceptance Criteria:**
  - Call `mistral-31-24b` vision model with pet photo + context (breed, age, condition focus)
  - Parse response → structure findings (severity, confidence, condition list)
  - Handle failures gracefully ("Image too dark, please retry")
  - Cache results 24h; re-analyze if user requests
  - **Latency:** <10sec from capture to report

- **API Integration:**
  ```
  // Pseudo-code for Venice call
  async function analyzePhoto(imageBase64, petContext) {
  const response = await venice.chat.completions.create({
  model: "mistral-31-24b",
  messages: [{
  role: "user",
  content: [
  { type: "text", text: `Analyze this ${petContext.breed} dog's ${imageContext}. Identify any health concerns: skin, eyes, teeth, gait. Provide confidence scores.` },
  { type: "image_url", image_url: { url: `${imageBase64}` } }
  ]
  }]
  });
  return parseFindings(response);
  }
  ```
- **Model Selection:** Mistral 3.1 24B (vision + reasoning + 131k context)
- **Owner:** Solo

3. Health Report Generation

- **Acceptance Criteria:**
  - Structured JSON output: `{ conditions: [], severity: [], recommendations: [], confidence: number }`
  - Human-readable summary + detailed findings
  - Visual report (PDF): photos + AI annotations + vet recommendations
  - Severity levels: Green (monitor), Yellow (routine vet), Red (urgent)
- **Tech:** Node.js backend + Puppeteer for PDF generation
- **Owner:** Solo

4. Health History Tracking

- **Acceptance Criteria:**
  - Timeline of all scans for each pet
  - Trend detection: "Skin improved 40% in 2 weeks"
  - Comparison views: "Current vs first scan 3 months ago"
  - Data export (CSV, PDF)
- **Tech:** PostgreSQL + React timeline charts
- **Owner:** Solo

5. Messaging Integration (Phase 1)

- **Acceptance Criteria:**
  - Pet owners message vets (1:1 chat per pet)
  - Vets see scan results + owner messages together
  - Typing indicators + read receipts
  - Push notifications for new messages
  - Message history searchable by condition
- **Tech:** Firebase Realtime DB or Supabase Realtime
- **Owner:** Solo (post-MVP)

6. Vet Clinic Dashboard (Phase 1)

- **Acceptance Criteria:**
  - Vets log in with license verification
  - See list of patients who shared scans
  - View scan history + trending conditions for each patient
  - Send templated care plans (e.g., "Dry eye treatment protocol")
  - Export reports for patient files
  - Access control: vets only see their referrals
- **Tech:** Admin panel (Next.js + Supabase RLS)
- **Owner:** Solo (post-MVP)

Non-Functional Requirements

Requirement	Target	Rationale
Availability	99.5% uptime	Pet owners need reliable access; health emergencies can't wait
Latency	<3sec app load; <10sec scan analysis	UX = key to trust
Security	HIPAA-ready encryption; SOC 2 Type II path	Medical data; user trust; insurance partnerships
Scalability	Support 100K concurrent users; 1M scans/month	Growth to $5M ARR = scale needs
Data Retention	7 years (matches medical records law)	Regulatory compliance; user data rights
Mobile Performance	<5MB app size; works on 2+ year old phones	Target demographic may use older devices

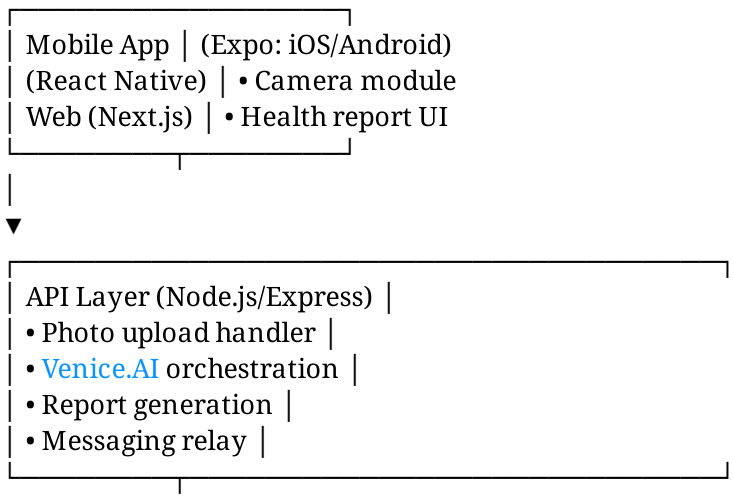
---

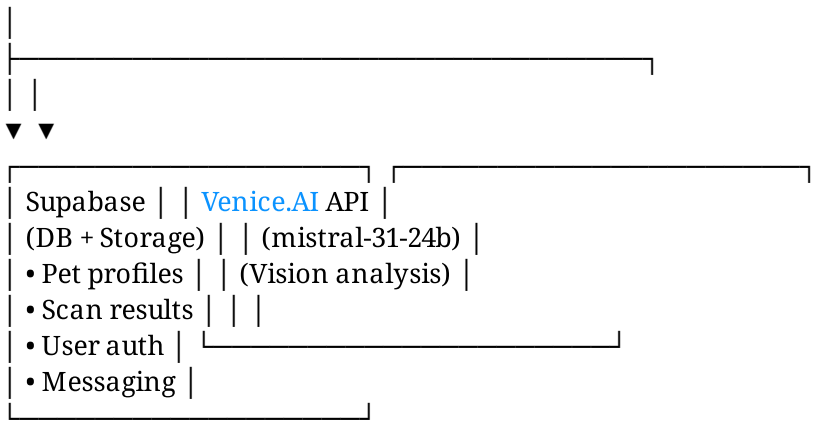
Technical Architecture

Tech Stack (Full Stack for Solo Build)

Layer	Technology	Why
Frontend	Next.js 15 + React Native Expo (iOS/Android)	Fast iteration; shared logic; web fallback
Backend	Node.js/Express + TypeScript	Type safety; fast Venice.AI integrations
Database	Supabase (PostgreSQL)	Real-time features; built-in auth; HIPAA pathway
AI/Vision	Venice.AI (mistral-31-24b)	Vision + reasoning; uncensored; affordable ($0.003/image)
Storage	Supabase Storage (S3-backed)	Encrypted; compliant; integrated auth
Authentication	Supabase Auth + RainbowKit (optional Web3)	Email/phone + social; optional wallet login for data ownership
Deployment	Vercel (frontend) + Akash Network (backend)	Cost-effective; decentralized option for privacy-focused users
Messaging	Firebase Realtime DB or Supabase Realtime	Real-time, low-latency vet communication
Monitoring	Sentry + LogRocket	Error tracking; user session replay for UX debugging

Architecture Diagram (Conceptual)





Venice.AI Integration Details

Primary Use Case: Vision Analysis of Pet Photos

```
// Backend: Scan Processing Service
import { createVeniceClient } from 'venice-ai-sdk';

const client = createVeniceClient({ apiKey: process.env.VENICE_API_KEY });

async function analyzePetPhoto(imageBase64: string, context: {
petName: string;
breed: string;
age: number;
scanType: 'eyes' | 'skin' | 'teeth' | 'gait' | 'multi';
}) {
try {
// Craft a vet-specific prompt
const systemPrompt = `You are a veterinary AI assistant trained on thousands of pet health images. Analyze the provided image of a ${context.breed}, age ${context.age}.

Format your response as JSON with this structure:
{
  "scan_type": "${context.scanType}",
  "conditions_detected": [
    { "name": "...", "severity": "green|yellow|red", "confidence": 0.95, "description
  ],
  "overall_severity": "green|yellow|red",
  "recommendation": "monitor|routine_vet|urgent_care",
  "next_steps": "...",
  "confidence_score": 0.92,
  "image_quality": "good|fair|poor"
}`;
```

```
const response = await client.chat.completions.create({
  model: 'mistral-31-24b',
  messages: [
    {
      role: 'system',
      content: systemPrompt
    },
    {
      role: 'user',
      content: [
        {
          type: 'text',
          text: `Analyze this image for health issues.`
        },
        {
          type: 'image_url',
          image_url: {
            url: `${imageBase64}`
          }
        }
      ]
    }
  ],
  temperature: 0.3, // Low temp for consistent medical analysis
  max_tokens: 1024
});

// Parse and structure response
const content = response.choices[0].message.content;
const findings = JSON.parse(content);

// Store in database
await db.scans.insert({
  pet_id: context.petName,
  findings,
  raw_response: content,
  timestamp: new Date(),
  image_hash: hashImage(imageBase64)
```

```
  });

  return findings;
```

} catch (error) {
console.error('Venice.AI vision analysis failed:', error);
// Graceful fallback: ask user to retry
throw new Error('Image analysis failed. Please ensure good lighting and try again.');
}
}

Cost Model:

- Mistral 3.1 24B: ~$0.003/image (100K scans/month = $300)
- Scale: At 1M scans/month = $3K/month (easily offset by premium subscriptions)

Fallback & Resilience:

- If Venice API fails: Store image, queue for retry (1hr later)
- If image quality poor: Prompt user to retake
- If model uncertain (confidence <60%): Recommend immediate vet visit

---

Data Model

Core Entities

Pet Profile

id (uuid)
user_id (fk)
name (string)
species (enum: dog, cat, other)
breed (string)
date_of_birth (date)
microchip_id (string, optional)
medical_history (text, optional)
created_at (timestamp)
updated_at (timestamp)

Scan Result

id (uuid)
pet_id (fk)
image_url (string) // S3 path
image_quality (enum: good, fair, poor)
scan_type (enum: eyes, skin, teeth, gait, multi)
ai_findings (json)
{
"conditions": [
{
"name": "Dry Eye Syndrome",

"severity": "yellow",
"confidence": 0.87,
"description": "Reduced tear film; recommend eye drops"
}
],
"overall_severity": "yellow",
"recommendation": "routine_vet",
"next_steps": "Schedule vet visit within 2 weeks"
}
vet_notes (text, optional)
created_at (timestamp)

Vet Clinic (Phase 1)

id (uuid)
name (string)
license_number (string) // Verified
address (string)
phone (string)
website (string)
created_at (timestamp)

Vet Clinic Access

id (uuid)
vet_id (fk to User where role='vet')
clinic_id (fk)
access_granted_at (timestamp)

Monetization Strategy

Revenue Streams

1. Consumer Subscription (Primary, Month 1+)

- **Free Tier:** 1 scan/month; limited history
- **Plus ($5/month):** Unlimited scans; 6-month history; PDF exports
- **Premium ($10/month):** Plus + direct vet messaging + breed-specific insights + early access to features
- **Target:** 80K at Plus + 20K at Premium = $6M/year

2. Vet Clinic Partnerships (Month 6+)

- **White-Label SaaS:** Vets offer PetVision to their patients
- **Pricing:** $500–2K/month per clinic (based on patient count)
- **Revenue Model:** Revenue share (70% vet, 30% PetVision)
- **Target:** 50 clinics by month 12 = $300K–1M annual recurring

3. Pet Insurance Partnerships (Month 9+)

- **Data Licensing:** De-identified scan insights help insurers identify high-risk conditions
- **API Access:** Insurers integrate with their claims platform
- **Pricing:** $50K–150K annual partnership
- **Target:** 3–5 major insurers = $300K–750K annual

4. Research & Academic Access (Year 2+)

- **Dataset License:** Aggregated, anonymized pet health data
- **Pricing:** Academic: free/minimal; Commercial: $100K+/year
- **Impact:** Accelerates research on early detection patterns

---

Go-to-Market Strategy

Phase 1: Organic Acquisition (Month 1–3)

Channels:

- **Reddit:** r/dogs, r/cats (2.8M users)
  - Share free scans; collect testimonials
  - AMA: "I built an AI vet app; ask me anything"
- **TikTok/Instagram:** Pet owner communities
  - 30-sec clip: "Skin scan saved us $1,200"
  - Behind-the-scenes: "How I trained the AI"
- **Product Hunt:** Launch with maker community
  - Target: #1 in Product Hunt; 500 upvotes
- **YouTube:** Vet creators + pet influencers
  - Outreach: "Free early access for your community"
  - Partner with 5–10 vet YouTubers (100K+ subs each)

Phase 2: Vet Clinic Pilots (Month 4–6)

Approach:

- Cold email to 100 clinics in major metros (SF, NYC, LA, Austin)
- Offer free white-label pilot for 3 months
- Testimonials → case study → partnership conversion
- Target: 50 clinics on platform

Phase 3: Influencer & Affiliate (Month 7+)

- **Pet Insurance Affiliates:** Partner with Lemonade, Pets Best; earn 10% affiliate commission
- **Vet Influencers:** Revenue share model (e.g., vet refers, earns $2/user/month)
- **Pet Health Bloggers:** Affiliate links; reviews

Phase 4: Paid Acquisition (Month 9+)

- **Google Ads:** Target "pet skin condition," "pet eye disease," etc. (high intent)
- **Meta (Facebook/Instagram):** Retargeting + lookalike audiences
- **TikTok Ads:** Younger pet owner segments
- **Budget:** Start with $2K/day; optimize to <$1 CAC

Metrics & Success Criteria

User Engagement (Monthly)

Metric	Target (Month 6)	Target (Month 12)
Monthly Active Users (MAU)	5K	50K
Daily Active Users (DAU)	1K	15K
Avg Scans/User/Month	2	3.5
Retention Day 7	50%	60%
Retention Day 30	30%	40%

Product Quality

Metric	Target
AI Accuracy (vs vet validation)	85%+
Confidence Score (avg)	>0.80
Image Quality (% good)	90%+
App Crash Rate	<0.1%
Load Time (scan to report)	<10 sec

Business

Metric	Target (Month 12)
Monthly Recurring Revenue (MRR)	$50K+
Customer Acquisition Cost (CAC)	<$5
Lifetime Value (LTV)	>$500
LTV:CAC Ratio	>100:1
Vet Clinic Integrations	50+

Risks & Mitigation

High-Risk Items

Risk	Probability	Impact	Mitigation
AI accuracy concerns	HIGH	HIGH	Start with conservative recommendations; always say "See a vet" for red flags; beta test with 1K users before launch
HIPAA/Regulatory friction	MEDIUM	HIGH	Consult healthcare attorney month 1; plan SOC 2 audit; partner with Stripe Health (knows compliance)
User drops after free tier	MEDIUM	HIGH	Gamify: "Health streaks"; offer 1 free premium scan/week; social features (pet community)
Vet adoption slow	MEDIUM	MEDIUM	Pilot with 10 vets first; gather testimonials; white-label reduces friction
Venice API rate limits	LOW	MEDIUM	Build queue system; batch scans during off-peak; negotiate volume pricing early
Competitor enters (e.g., Chewy, Rover)	MEDIUM	HIGH	Build data moat (100K scans + insurance partnerships); emphasize vet integration

Mitigation Strategies

1. **MVP Scope:** Focus on 3 conditions (eyes, skin, teeth) before expanding; reduces ML training burden
2. **Vet Validation:** Pre-launch: Have 5 vets blind-test accuracy; iterate until >80%
3. **Legal Early:** Month 1: Consult healthcare attorney on liability + HIPAA; get E&O insurance
4. **Community Building:** Launch private Slack for early users; weekly check-ins; build moat of loyalty

---

Development Roadmap

Phase 0: Foundation (Weeks 1–2, Solo Build)

- [ ] Venice.AI API key + environment setup
- [ ] Supabase project (DB + auth + storage)
- [ ] Boilerplate: Next.js backend + Expo frontend
- [ ] Photo upload pipeline (client → S3)
- [ ] Vet advisory board kickoff (5 vets, brief calls)

Phase 1: MVP (Weeks 3–10, Solo with AI Coding)

- [ ] Camera module + photo capture
- [ ] Venice.AI vision analysis integration
- [ ] Health report generation (structured JSON → readable format)
- [ ] Health timeline (scans + trends)
- [ ] User auth (email/phone)
- [ ] Pet profile creation
- [ ] PDF export
- [ ] App store deployment (iOS + Android)
- [ ] Beta testing (100 users, vet feedback loops)

Phase 2: Polish & Launch (Weeks 11–12)

- [ ] Crash fix + performance optimization
- [ ] UI/UX refinements from beta
- [ ] Marketing setup (Product Hunt, Reddit, YouTube outreach)
- [ ] Support system (Intercom)
- [ ] Analytics (Mixpanel)
- [ ] **Public Launch**

Phase 3: Vet Integration (Weeks 13–16, Month 4)

- [ ] Vet login + clinic dashboard
- [ ] Messaging integration (Firebase Realtime)
- [ ] Scan history (multi-pet, multi-clinic)
- [ ] Care plan templates
- [ ] Pilot with 10 vets

Phase 4: Premium Features (Weeks 17–20, Month 5)

- [ ] Breed-specific insights (knowledge base)
- [ ] Chronic condition tracking (diabetes, respiratory templates)
- [ ] Automated reminders
- [ ] Report export for insurance

Phase 5: Enterprise (Weeks 21–24, Month 6)

- [ ] Pet insurer pilots
- [ ] API for clinic white-label
- [ ] Analytics dashboard (aggregate trends)

Competitive Landscape

Direct Competitors

1. **MyFurtopia (TTcare)** – Highest accuracy (95%); clinically validated; but consumer-only, no vet integration
2. **PetDX** – General health records; no AI vision; focuses on records management

Indirect Competitors

- Pet insurance companies (Lemonade, Pets Best) – have customer relationship but not AI monitoring
- Vet clinics – own patient relationships but lack tech
- Pet wearables (Fi, Whistle) – track activity, not visual health

PetVision Differentiation

- **Unified platform:** Consumer AI + vet clinic integration (no competitor has this)
- **Data moat:** Every scan trains future models (insurance partnerships = leverage)
- **Accessibility:** Works on any phone, no special hardware
- **Trust:** Backed by vet advisory board + conservative recommendations ("Always see a vet if unsure")

Success Definition

MVP Success (Month 3):

- ✅ 100 beta testers; 85%+ AI accuracy (vet-validated)
- ✅ 4.5+ star rating on app stores
- ✅ $0 churn rate (free tier retention >50% at day 30)
- ✅ 5+ vet testimonials; 0 liability issues

Product-Market Fit (Month 6):

- ✅ 5K MAU; 2+ scans/user/month (organic growth, <$5 CAC from organic)
- ✅ 10 vet clinics actively using; >80% vet satisfaction
- ✅ First paying customers (Plus tier) at 30%+ conversion
- ✅ Initial insurance partnership discussions underway

Scale Phase (Month 12):

- ✅ 50K MAU; $50K MRR
- ✅ 50 vet clinics; 2+ insurance partnerships
- ✅ LTV:CAC >100:1
- ✅ Seed funding or profitability path clear

Appendix

A. Venice.AI Model Selection Rationale

Model	Vision?	Reasoning?	Context	Cost	Decision
Mistral 3.1 24B	✅ Yes	✅ Yes	131k	$0.003/scan	✅ **Selected**
GPT-4 Vision	✅ Yes	✅ Yes	128k	$0.015/scan	❌ Too expensive
Claude 3 Vision	✅ Yes	✅ Yes	200k	$0.004/scan	⚠ Need Venice SDK

Why Mistral 3.1? Best cost:quality ratio; fast inference; strong reasoning for conditional logic ("If confidence <70%, recommend vet visit").

B. Vet Advisory Board (Kickstart Phase)

Goal: Validate accuracy; gather testimonials; identify clinic friction

Recruitment:

- 5 vets: mix of independent + group practice
- Offer: Free premium access (lifetime) + featured as "Founding Vet Partner"
- Time commitment: 1 hour/week for 6 weeks (beta testing)

Activities:

1. Week 1: Intake call – learn their current workflows
2. Weeks 2–4: Blind testing (vet validates AI findings on 20 cases)
3. Week 5: Feedback session; iterate on recommendations
4. Week 6: Testimonial video (for marketing)

C. Regulatory & Compliance Checklist

- [ ] **HIPAA Analysis:** Consult healthcare attorney; determine if we're a Business Associate
- [ ] **FDA Medical Device:** Determine if AI warrants FDA classification; likely de minimis (not diagnosing, advising)
- [ ] **State Vet Laws:** Some states prohibit remote diagnosis; ensure messaging = "AI screening, not diagnosis"

- [ ] **Liability Insurance:** Get E&O policy; clause for AI-related claims
- [ ] **Terms of Service:** Explicit disclaimer: "Not a replacement for vet care"
- [ ] **Data Privacy:** GDPR + CCPA compliance; data residency for EU users
- [ ] **Accessibility:** WCAG 2.1 AA compliance

D. Sample Venice.AI Prompt Engineering

System Prompt for Pet Health Vision Analysis

You are a veterinary AI assistant with expertise in visual diagnosis. You analyze photos of pets (dogs and cats) to identify early signs of health issues.

Your Role:

- Analyze images for visible health indicators
- Provide structured, actionable findings
- Always recommend professional vet evaluation for confirmatory diagnosis
- Flag urgent conditions (breathing difficulty, severe trauma) as "URGENT CARE NEEDED"

Analysis Framework:

1. **Eyes:** Dry eye (red, crusty), cloudiness (cataract), redness (inflammation), discharge
2. **Skin:** Lesions, hair loss, rash, swelling, parasitic signs (flea dirt, mites)
3. **Teeth:** Tartar buildup, discoloration, gum bleeding, tooth loss
4. **Gait:** Limping, stiffness, uneven weight distribution, reluctance to move
5. **Overall:** Body condition score, signs of pain/distress, unusual lumps

Output Format (JSON):

{
"scan_type": "eyes|skin|teeth|gait|multi",
"breed": "...",
"age_estimated": "based on coat, teeth",
"findings": [
{
"area": "right eye",
"condition": "Dry eye syndrome",
"severity": "yellow",
"confidence": 0.87,
"description": "Excessive dryness; recommend eye drops"
}
],
"overall_severity": "green|yellow|red",
"recommendation": "monitor_at_home|routine_vet_visit|urgent_care",
"next_steps": "...",
"image_quality_score": 0.95,

"limitations": "Could not fully assess due to lighting/angle"
}

Confidence Scoring:

- 0.90: High confidence (share with vet)
- 0.70–0.90: Moderate (recommend vet visit)
- <0.70: Low (ask user to retake photo with better lighting)

Safety Rules:

- If unsure, recommend "routine vet visit within 2 weeks"
- If severe signs (labored breathing, trauma, unconsciousness): "SEEK URGENT CARE"
- Never say "your pet has X disease" – say "findings suggest possible X; vet evaluation needed"

E. Deployment Instructions (Akash Network Option)

For decentralized, privacy-focused deployment (alternative to AWS/GCP):

akash-deploy.yaml - Minimal backend for PetVision

version: "2.0"
services:
api:
image: petvision-api:latest
expose:
- port: 3000
as: 3000
to:
- global: true
env:
- VENICE_API_KEY=<sensitive>
- DATABASE_URL=postgresql://...
- NODE_ENV=production
resources:
cpu:
units: 2
memory:
size: 2Gi
storage:
size: 10Gi

pricing:
api:
denom: uakt
amount: 1000

deployment:
api:
akash:
profile: api
count: 1

Deploy with:

akash tx deployment create akash-deploy.yaml \

--from <wallet> --node https://rpc.akash.network:443 \

--chain-id akash-mainnet-1

Document Control

Version	Date	Author	Changes
1.0	Dec 29, 2025	Founder	Initial PRD for MVP phase; Venice.AI integration spec
1.1	TBD	Team	Post-vet feedback; refined accuracy targets

Next Steps:

1. Share PRD with vet advisory board for feedback (1 week)
2. Set up Venice.AI dev environment + Supabase (Week 1)
3. Begin MVP development (Weeks 2–10)
4. Public launch + first press (Week 12)

Questions? Contact founder for clarifications.