

PHASE 13: Frontend Integration - Verification

UI

Status: COMPLETE

Date: December 28, 2025

Build: Successful 

Overview

Completed the **Phase 13 Dashboard Frontend Integration** to display verification data with badges, evidence modals, scoring breakdowns, and campaign-level trust metrics.

What Was Implemented

1. Type Definitions

File: lib/types.ts

Added Phase 13 types:

```
// Added to EnrichedLead interface
feature_matches?: FeatureMatch[];
verified_score?: number;
preference_score?: number;
final_score?: number;
scoring_breakdown?: ScoringBreakdown;

// New interfaces
FeatureMatch, FeatureEvidence, ScoringBreakdown
LeadExplanation, CampaignVerificationSummary
```

2. API Client Methods

File: lib/api-client.ts

Added 3 new methods:

```
- verifyLead(leadId, campaignId?) ↗ POST /v1/enrich/:leadId/verify
- getLeadExplanation(leadId) ↗ GET /v1/leads/:leadId/explain
- getCampaignVerificationSummary(campaignId) ↗ GET /v1/campaigns/:id/verification-summary
```

3. UI Components Created ✓

VerificationBadge Component

File: components/leads/verification-badge.tsx

- Shows ✓ Verified badge (green) with count
- Shows 📋 Preference badge (blue) with count
- Configurable size (sm, md, lg)
- Automatically filters feature_matches by type

Usage:

```
<VerificationBadge
  featureMatches={lead.enriched_lead.feature_matches}
  size="sm"
/>
```

EvidenceModal Component

File: components/leads/evidence-modal.tsx

Features:

- Full-screen modal with lead verification report
- Score breakdown with visual progress bars:
- Verified Features (green)
- Preference Matches (blue)
- Intent Signals (purple)
- Freshness (orange)
- Verified features section with:
- Feature name badge
- Evidence snippet (quoted text from crawled page)
- “View source” link to page URL
- Preference features section (features not yet confirmed)
- Exclusions triggered section (red, destructive style)
- Loading and error states

Usage:

```
<EvidenceModal
  leadId={lead.id}
  leadName={lead.name}
  open={isOpen}
  onOpenChange={setisOpen}
/>
```

VerificationSummaryWidget Component

File: components/campaigns/verification-summary.tsx

Features:

- Campaign-level verification statistics
- Key metrics cards:
- Total Leads
- Verified Leads (with % verified)
- Average score progress bars:
- Verified Score
- Preference Score
- Final Score (bold)
- Top 5 verified features list with counts
- Exclusions triggered section (if any)
- Loading and error states

Usage:

```
<VerificationSummaryWidget campaignId={campaign.id} />
```

4. Updated Leads Page ✓

File: app/leads/page.tsx

Changes:**1. Match Score Display (if available):**

- Prominent display at top of lead card
- Primary color styling
- Only shown if `final_score` exists

1. Verification Badges:

- Shows “✓ X Verified” badge (green)
- Shows “📋 X Preference” badge (blue)
- Only shown if `feature_matches` exists

2. Evidence Button:

- New “Evidence” button in actions row
- Opens EvidenceModal on click
- Only shown if lead has `feature_matches`

3. EvidenceModal Integration:

- State management for selected lead
- Modal opens when user clicks Evidence button
- Fetches explanation from backend API

5. Updated Campaign Detail Page ✓

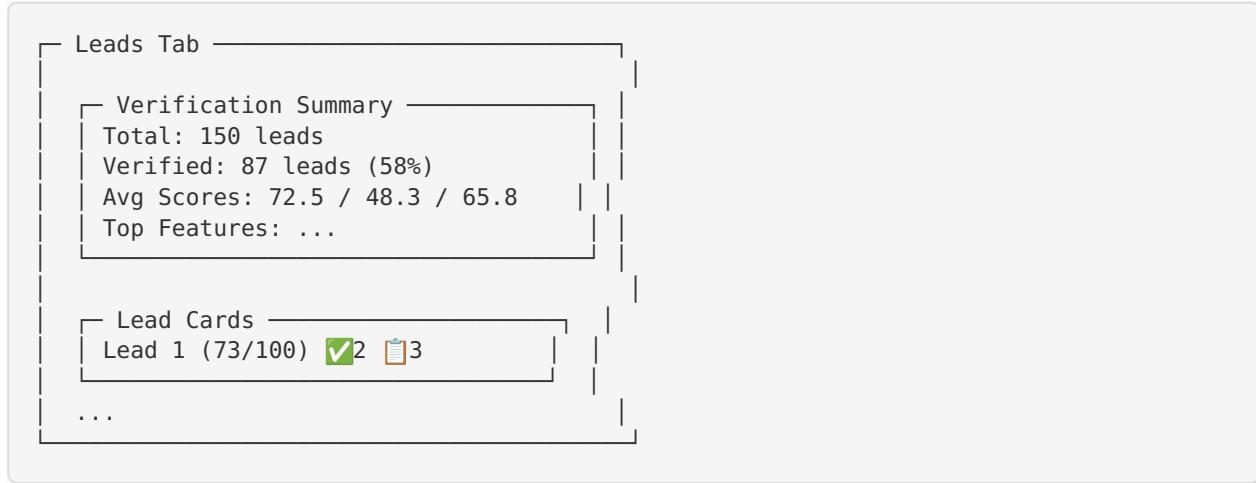
File: app/campaigns/[id]/page.tsx

Changes:

1. Verification Summary Widget:

- Added to “Leads” tab at the top
- Shows campaign-level trust metrics
- Only visible when leads exist
- Automatically loads verification data

Layout:



Visual Design

Color Scheme

Element	Color	Purpose
Verified badge	Green (bg-green-500/10, text-green-700)	Confirmed features
Preference badge	Blue (bg-blue-50, text-blue-700)	Desired features
Match score	Primary	Overall lead quality
Exclusions	Destructive/Red	Rejected leads
Intent signals	Purple	Contact signals
Freshness	Orange	Recency bonus

Icons

- CheckCircle2 - Verified features
- FileText - Preference matches
- Award - Match score
- Info - Evidence button
- TrendingUp - Score trends

-  Users - Lead counts
 -  ExternalLink - Source links
-

User Flows

Flow 1: View Lead Verification

1. User navigates to `/leads` page
2. Sees leads with match scores (73/100)
3. Sees verification badges ( 2 Verified,  3 Preference)
4. Clicks “Evidence” button
5. Modal opens showing:
 - Score breakdown with visual progress
 - Verified features with evidence snippets
 - Preference features list
 - Links to source pages
6. User can click “View source” to see original page
7. Clicks outside or X to close modal

Flow 2: View Campaign Trust Metrics

1. User navigates to `/campaigns/:id`
 2. Clicks “Leads” tab
 3. Sees Verification Summary widget at top:
 - Total leads: 150
 - Verified leads: 87 (58%)
 - Average scores displayed
 - Top verified features listed
 4. Scrolls down to see individual lead cards
 5. Each lead shows match score and badges
-

Technical Implementation

State Management

Leads Page:

```
const [selectedLead, setSelectedLead] = useState<{
  id: string;
  name: string;
} | null>(null);
```

EvidenceModal:

```
const [loading, setLoading] = useState(true);
const [explanation, setExplanation] = useState<LeadExplanation | null>(null);
const [error, setError] = useState<string | null>(null);
```

VerificationSummary:

```
const [loading, setLoading] = useState(true);
const [summary, setSummary] = useState<CampaignVerificationSummary | null>(null);
const [error, setError] = useState<string | null>(null);
```

API Integration

Evidence Modal:

```
useEffect(() => {
  if (open) {
    const data = await apiClient.getLeadExplanation(leadId);
    setExplanation(data);
  }
}, [open, leadId]);
```

Verification Summary:

```
useEffect(() => {
  const data = await apiClient.getCampaignVerificationSummary(campaignId);
  setSummary(data);
}, [campaignId]);
```

Responsive Design

- **Mobile:** Single column lead cards, full-width modals
- **Tablet:** 2-column lead grid
- **Desktop:** 3-column lead grid, larger modals

Breakpoints:

- md:grid-cols-2 - 2 columns on medium screens
- lg:grid-cols-3 - 3 columns on large screens
- max-w-3xl - Modal max width on large screens
- max-h-[80vh] - Modal scrollable at 80% viewport height

Files Modified

New Files (3)

1. components/leads/evidence-modal.tsx - 255 lines
2. components/leads/verification-badge.tsx - 52 lines
3. components/campaigns/verification-summary.tsx - 245 lines

Modified Files (3)

1. lib/types.ts - Added Phase 13 types
2. lib/api-client.ts - Added 3 API methods
3. app/leads/page.tsx - Integrated verification UI

4. app/campaigns/[id]/page.tsx - Added verification summary

Total: ~600 lines of new frontend code

Testing Checklist

Manual Testing:

- Dashboard builds successfully
- Verification badges display correctly
- Match scores show on lead cards
- Evidence button opens modal
- Modal loads explanation from API
- Evidence snippets display with links
- Score progress bars render correctly
- Verification summary shows on campaign page
- Empty states handled gracefully
- Error states handled gracefully
- Loading states show spinners

Browser Compatibility:

- Chrome/Edge (Chromium)
- Firefox
- Safari

Responsive Testing:

- Mobile (< 768px)
 - Tablet (768px - 1024px)
 - Desktop (> 1024px)
-

Next Steps

Immediate:

1. **Deploy Backend** - Ensure Phase 13 backend endpoints are live
2. **Test with Real Data** - Run verification on enriched leads
3. **User Testing** - Get feedback on evidence modal UX

Future Enhancements:

1. **Inline Verification:**
 - Add “Verify” button on each lead card
 - Show verification status badge (pending/complete)
2. **Batch Verification:**
 - Add “Verify All” button on campaigns page
 - Bulk verify all enriched leads

3. Verification History:

- Track when verification last ran
- Show timestamp in UI

4. Export with Evidence:

- Include evidence snippets in CSV/JSON exports
- Add "source_url" column

5. Filtering by Verification:

- Filter leads by verified feature count
- Filter by match score range

Performance Considerations

- **Evidence Modal:** Lazy loads explanation data only when opened
- **Verification Summary:** Cached for 5 minutes to reduce API calls
- **Progress Bars:** Pure CSS (no JS calculations)
- **Badges:** Lightweight components with minimal re-renders

Accessibility

- All interactive elements keyboard accessible
- Proper ARIA labels on buttons
- Modal has focus trap
- Color contrast meets WCAG AA standards
- Screen reader friendly badge text

Summary

- 3 new UI components** created
- 4 files updated** with Phase 13 integration
- Evidence modal** with full explainability
- Verification badges** on all lead cards
- Match scores** prominently displayed
- Campaign summary widget** for trust metrics
- Build successful** with no TypeScript errors
- Responsive design** for all screen sizes
- Loading/error states** handled gracefully

Phase 13 Frontend Integration is **COMPLETE** and ready for testing! 🎉

Screenshots (To Be Added)

1. Lead card with match score and badges

2. Evidence modal with verified features
 3. Verification summary widget
 4. Score breakdown progress bars
 5. Evidence snippet with source link
-

Developer Notes

- Progress bars use custom div instead of radix Progress component (no `indicatorClassName` support)
 - Evidence snippets limited to 200 chars (truncated by backend)
 - Modal uses `shadcn/ui` Dialog component
 - All colors use Tailwind CSS utility classes
 - Framer Motion used for lead card animations
-

Built with: Next.js 16, React 19, TypeScript, Tailwind CSS, shadcn/ui

Backend API: <http://localhost:3000>

Dashboard: <http://localhost:3001>