Map Race Condition Fix

Problem Identified

The map feature was experiencing a **race condition** that prevented markers from rendering:

Root Cause

1. **Leaflet loaded** → set `mapLoaded = true`
2. **Markers effect triggered** (depends on `L` and `data`)
3. **Map initialization incomplete** → `mapRef.current` still `null`
4. **Markers effect skipped** with error: "No Leaflet" or "No map"

The issue was that the map initialization effect had multiple async delays:
- `requestAnimationFrame()` delay
- `setTimeout(..., 100)` delay

So the markers effect would fire before `mapRef.current` was actually set, causing the markers to be skipped.

Console Evidence

From the user's screenshot:

```
✅ Query completed with results (100 records with lat/lon)
❌ [HeatMap] Markers effect skipped: { reason: 'No Leaflet' }
❌ [HeatMap] Markers effect skipped: { reason: 'No map' }
✅ Initializing map with container dimensions: 1144 x 596
```

Solution Implemented

Added a new `mapReady` state variable that signals when the map is **fully initialized and ready for markers**.

Changes Made

1. **Added `mapReady` state**:

```
const [mapReady, setMapReady] = useState(false);
```

1. **Set `mapReady` after map initialization completes**:

```
mapRef.current = map;
initializingRef.current = false;
setMapReady(true); // Signal that map is ready for markers
```

1. **Updated markers effect to depend on `mapReady`**:

```
useEffect(() => {
  // Wait for map to be fully initialized before adding markers
  if (!L || !mapReady || !mapRef.current || data.length === 0) {
    return;
  }

  // Add markers...
}, [L, mapReady, data]); // Include mapReady in dependencies
```

1. **Reset `mapReady` on cleanup**:

```
return () => {
  // Cleanup...
  setMapReady(false);
};
```

Expected Behavior

After the fix:
1. Leaflet library loads
2. Map container initializes
3. `mapReady` becomes `true`
4. Markers effect triggers and successfully adds markers
5. Map displays with all 100 customer locations

Testing

- ✅ Build successful
- ✅ No TypeScript errors
- ✅ Deployed to ncc-1701.io
- ✅ Checkpoint saved

Next Steps

Please test by:
1. Navigate to the dashboard
2. Run query: "customers in the last month"
3. Verify map auto-selects
4. Verify all 100 markers display on the map
5. Check console for: `[HeatMap] Map initialization complete, ready for markers`

Fixed: November 5, 2025
Issue: Race condition in map initialization
Solution: Added mapReady state to ensure proper initialization order