

# Account Density Analysis - Complete Deliverables

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## Executive Summary

You now have **TWO** powerful ways to visualize and analyze account density across your territories:

1. **Interactive Web Map** (Mapbox-powered, best for exploration)
2. **Static HTML Charts** (Perfect for presentations and reports)

Both show the same critical insight: **84.6% overall churn rate** with significant variation by territory.

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## Interactive Density Map Application

### Location

```
/home/ubuntu/density_map/nextjs_space/
```

### How to Launch

```
cd /home/ubuntu/density_map/nextjs_space
yarn dev
```

Then open: <http://localhost:3000>

### Features

#### Three View Modes:

- Active Account Density (green gradient)
- Terminated Account Density (red gradient)
- Churn Rate (green-to-red gradient)

#### Interactive Elements:

- Click any ZIP code for detailed popup
- Filter by territory (West, Central, East, Tucson)
- Real-time statistics sidebar
- Graduated color scaling by density



## Static Visualizations (HTML Charts)

### Files Created

1. **density\_viz\_top\_30\_active.html** - Top 30 ZIPs by active customers
2. **density\_viz\_top\_30\_terminated.html** - Top 30 ZIPs by terminated customers
3. **density\_viz\_area\_comparison.html** - Territory comparison dashboard

4. [density\\_viz\\_scatter\\_comparison.html](#) - Active vs Terminated bubble chart
5. [density\\_viz\\_churn\\_distribution.html](#) - Churn rate box plots

## How to Open

Simply open any `.html` file in your browser

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## Data Files

### CSV Files

- **DENSITY\_TOP\_50\_ACTIVE\_ZIPS.csv** - Top 50 by active accounts
- **DENSITY\_TOP\_50\_TERMINATED\_ZIPS.csv** - Top 50 by terminated accounts
- **DENSITY\_HIGHEST\_CHURN\_ZIPS.csv** - Top 50 by churn rate
- **account\_density\_by\_zip.csv** - Complete dataset (156 ZIPs)
- **area\_density\_summary.csv** - Territory-level summary

### JSON Files

- **DENSITY\_SUMMARY\_STATS.json** - Machine-readable metrics
  - **density-map-data.json** - GeoJSON with boundaries (in map public folder)
  - **area-statistics.json** - Territory statistics (in map public folder)
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## Documentation

### **DENSITY\_MAP\_ANALYSIS\_README.md**

Complete 240-line analysis with:

- Executive summary with key findings
  - Interactive map usage instructions
  - Color legend explanations
  - Strategic insights and recommendations
  - Technical specifications
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## 🎯 Key Insights

### Territory Performance

Territory	ZIPs	Active	Terminated	Churn Rate
<b>West</b>	45	529	3,599	<b>86.9%</b> ⚠
<b>Central</b>	49	527	3,010	<b>84.6%</b>
<b>East</b>	36	570	2,527	<b>80.9%</b> ✓
<b>Tucson</b>	26	73	226	<b>72.5%</b> ✓✓

## Critical Issues

1. West Territory: 86.9% churn (highest)
2. ZIP 85308 (Glendale): 87% churn
3. ZIP 85331: 87.6% churn

## Top Opportunities

1. ZIP 85122 (Casa Grande): 89 active accounts
  2. ZIP 85254 (N. Scottsdale): 56 active accounts
  3. ZIP 85308 (Glendale): 40 active accounts
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## Quick Start Guide

### For Presentations

1. Open `density_viz_area_comparison.html`
2. Show territory comparison
3. Drill into `density_viz_top_30_active.html` for details

### For Analysis

1. Open `DENSITY_TOP_50_ACTIVE_ZIPS.csv` in Excel
2. Create pivot tables
3. Cross-reference with `DENSITY_HIGHEST_CHURN_ZIPS.csv`

### For Exploration

1. Launch interactive map: `cd density_map/nextjs_space && yarn dev`
  2. Toggle between Active/Terminated/Churn views
  3. Click ZIP codes for detailed popups
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**Status:** **COMPLETE AND READY FOR USE**

**Analysis Date:** October 30, 2025

**Version:** 1.0

**Total Deliverables:** 19 files