Based on my analysis of the existing codebase, I can now provide a comprehensive list of missing data fields required for the user sign-up process and analysis features. Here's the detailed breakdown:

**Missing Data Fields for User Sign-Up Process and Analysis Features**

**🔴 CRITICAL - Required for Core Functionality**

**User Authentication & Profile**

* **first\_name** - Required for personalization and legal compliance
* **last\_name** - Required for personalization and legal compliance
* **date\_of\_birth** - Required for age-based analysis and compliance
* **zip\_code** - Required for demographic analysis and location-based insights
* **phone\_number** - Required for multi-factor authentication and notifications
* **email\_verification\_status** - Required for account security

**Financial Data (Core)**

* **monthly\_income** - Required for financial analysis and planning
* **income\_frequency** - Required for cash flow calculations (weekly, bi-weekly, monthly)
* **primary\_income\_source** - Required for income stability analysis
* **current\_savings\_balance** - Required for emergency fund analysis
* **total\_debt\_amount** - Required for debt-to-income ratio calculations
* **credit\_score\_range** - Required for financial health assessment
* **employment\_status** - Required for income stability analysis

**Banking Integration**

* **bank\_account\_connected** - Required for transaction analysis
* **plaid\_access\_token** - Required for bank data retrieval
* **account\_verification\_status** - Required for data reliability

**🟡 IMPORTANT - Required for Enhanced Analysis**

**Demographic & Life Stage**

* **age\_range** - Important for age-based financial recommendations
* **marital\_status** - Important for relationship-based financial planning
* **dependents\_count** - Important for family financial planning
* **household\_size** - Important for expense allocation analysis
* **education\_level** - Important for career and income analysis
* **occupation** - Important for industry-specific insights
* **industry** - Important for career risk assessment
* **years\_of\_experience** - Important for income projection analysis

**Financial Goals & Preferences**

* **primary\_financial\_goal** - Important for goal-based analysis
* **risk\_tolerance\_level** - Important for investment recommendations
* **financial\_knowledge\_level** - Important for educational content
* **preferred\_contact\_method** - Important for user engagement
* **notification\_preferences** - Important for user experience

**Health & Wellness**

* **health\_checkin\_frequency** - Important for wellness correlation analysis
* **stress\_level\_baseline** - Important for health-spending correlation
* **wellness\_goals** - Important for holistic financial planning

**🟢 NICE TO HAVE - Enhanced Features**

**Advanced Financial Data**

* **investment\_portfolio\_value** - Nice to have for wealth analysis
* **insurance\_coverage\_details** - Nice to have for risk assessment
* **retirement\_account\_balance** - Nice to have for retirement planning
* **real\_estate\_holdings** - Nice to have for net worth analysis
* **business\_ownership** - Nice to have for income diversification

**Career & Professional**

* **job\_satisfaction\_level** - Nice to have for career risk assessment
* **career\_goals** - Nice to have for income projection
* **industry\_trends\_awareness** - Nice to have for career planning
* **salary\_benchmarks** - Nice to have for compensation analysis

**Relationship & Family**

* **relationship\_duration** - Nice to have for relationship-based analysis
* **financial\_dependencies** - Nice to have for family planning
* **shared\_expenses** - Nice to have for household analysis
* **childcare\_costs** - Nice to have for family financial planning
* **eldercare\_costs** - Nice to have for multi-generational planning

**📊 Analysis Features Requiring Additional Data**

**Financial Health Scoring**

* **emergency\_fund\_months** - Required for emergency fund adequacy
* **debt\_to\_income\_ratio** - Required for debt management analysis
* **savings\_rate\_percentage** - Required for savings analysis
* **budget\_adherence\_score** - Required for budget analysis
* **spending\_pattern\_category** - Required for spending analysis

**Predictive Analytics**

* **income\_stability\_score** - Required for income forecasting
* **expense\_volatility** - Required for cash flow forecasting
* **financial\_stress\_indicators** - Required for wellness correlation
* **goal\_achievement\_rate** - Required for success prediction

**Personalization Features**

* **preferred\_analysis\_depth** - Required for content customization
* **learning\_style** - Required for educational content
* **engagement\_pattern** - Required for feature recommendations
* **feature\_usage\_preferences** - Required for UI customization

**🔧 Technical Implementation Requirements**

**Data Validation**

* **data\_quality\_score** - Required for analysis reliability
* **data\_completeness\_percentage** - Required for analysis accuracy
* **last\_data\_update** - Required for data freshness
* **data\_source\_verification** - Required for data trustworthiness

**Privacy & Compliance**

* **gdpr\_consent\_status** - Required for data processing
* **data\_sharing\_preferences** - Required for privacy compliance
* **anonymization\_level** - Required for data protection
* **retention\_policy\_consent** - Required for data retention

**System Integration**

* **api\_integration\_status** - Required for external data
* **sync\_frequency** - Required for data freshness
* **error\_handling\_preferences** - Required for system reliability
* **backup\_preferences** - Required for data protection

**📋 Implementation Priority Matrix**

| **Priority** | **Category** | **Fields** | **Impact** | **Effort** |
| --- | --- | --- | --- | --- |
| **Critical** | Authentication | first\_name, last\_name, email\_verification | High | Low |
| **Critical** | Financial Core | monthly\_income, current\_savings, total\_debt | High | Medium |
| **Important** | Demographics | age\_range, marital\_status, dependents | Medium | Low |
| **Important** | Goals | primary\_financial\_goal, risk\_tolerance | Medium | Low |
| **Nice to Have** | Advanced | investment\_portfolio, insurance\_details | Low | High |

**🚀 Recommended Implementation Strategy**

**Phase 1: Critical Fields (Week 1-2)**

1. Add missing authentication fields to user registration
2. Implement core financial data collection
3. Add basic demographic information
4. Set up data validation and quality checks

**Phase 2: Important Fields (Week 3-4)**

1. Add goal and preference fields
2. Implement health and wellness data collection
3. Add career and professional information
4. Enhance data analysis capabilities

**Phase 3: Enhanced Features (Week 5-6)**

1. Add advanced financial data fields
2. Implement relationship and family data
3. Add predictive analytics requirements
4. Enhance personalization features

This comprehensive list ensures that the MINGUS application has all necessary data fields to provide accurate financial analysis, personalized recommendations, and meaningful insights to users while maintaining compliance with privacy and security requirements.

**MINGUS User Data Collection Prompts**

**🔴 CRITICAL FIELDS - Required for Core Functionality**

**Personal Information & Authentication**

**First Name**

* Prompt: "What's your first name?"
* Placeholder: "Enter your first name"
* Validation: Required, 2-50 characters, letters only

**Last Name**

* Prompt: "What's your last name?"
* Placeholder: "Enter your last name"
* Validation: Required, 2-50 characters, letters only

**Date of Birth**

* Prompt: "When were you born?"
* Subtitle: "We use this to provide age-appropriate financial advice"
* Input Type: Date picker
* Validation: Must be 18+ years old

**ZIP Code**

* Prompt: "What's your ZIP code?"
* Subtitle: "This helps us provide location-specific financial insights"
* Placeholder: "12345"
* Validation: 5-digit US ZIP code

**Phone Number**

* Prompt: "What's your phone number?"
* Subtitle: "For account security and important notifications"
* Placeholder: "(555) 123-4567"
* Validation: Valid US phone number format

**Email Verification**

* Prompt: "Please verify your email address"
* Action: "We've sent a verification code to [email]. Please enter it below."
* Input: 6-digit verification code

**Core Financial Information**

**Monthly Income**

* Prompt: "What's your monthly income before taxes?"
* Subtitle: "Include all sources of income"
* Input Type: Currency field
* Placeholder: "$5,000"
* Validation: $0 - $999,999

**Income Frequency**

* Prompt: "How often do you receive income?"
* Options:
  + Weekly
  + Bi-weekly (every 2 weeks)
  + Semi-monthly (twice a month)
  + Monthly
  + Annually

**Primary Income Source**

* Prompt: "What's your primary source of income?"
* Options:
  + Full-time employment
  + Part-time employment
  + Self-employment/Freelancing
  + Business ownership
  + Investment income
  + Retirement/Pension
  + Government benefits
  + Child Support

**Current Savings Balance**

* Prompt: "How much do you currently have in savings?"
* Subtitle: "Include checking, savings, and money market accounts"
* Input Type: Currency field
* Placeholder: "$10,000"
* Option: "I prefer not to say" checkbox

**Total Debt Amount**

* Prompt: "What's your total debt amount?"
* Subtitle: "Include credit cards, loans, mortgage, etc."
* Input Type: Currency field
* Placeholder: "$25,000"
* Option: "I don't have any debt" checkbox

**Employment Status**

* Prompt: "What's your current employment status?"
* Options:
  + Employed full-time
  + Employed part-time
  + Self-employed
  + Unemployed
  + Student
  + Retired
  + Unable to work

**Banking Integration**

**Bank Account Connection**

* Prompt: "Would you like to connect your bank account for personalized insights?"
* Subtitle: "This allows us to provide more accurate financial analysis"
* Options: "Connect Bank Account" button or "Skip for now"

**Account Verification**

* Prompt: "Let's verify your bank account"
* Subtitle: "We'll make two small deposits (under $1) that you'll need to confirm"
* Action: Micro-deposit verification process

**🟡 IMPORTANT FIELDS - Enhanced Analysis**

**Demographics & Life Stage**

**Age Range Confirmation**

* Prompt: "Which age group best describes you?"
* Options:
  + 18-24
  + 25-34
  + 35-44
  + 45-54
  + 55-64
  + 65+

**Marital Status**

* Prompt: "What's your relationship status?"
* Options:
  + Single
  + Married
  + Domestic partnership
  + Divorced
  + Widowed
  + It’s Complicated

**Number of Dependents**

* Prompt: "How many dependents do you have?"
* Subtitle: "Include children, elderly parents, or others you financially support"
* Input Type: Number selector (0-10+)

**Household Size**

* Prompt: "How many people live in your household?"
* Subtitle: "Including yourself"
* Input Type: Number selector (1-10+)

**Education Level**

* Prompt: "What's your highest level of education?"
* Options:
  + High school diploma/GED
  + Some college
  + Associate's degree
  + Bachelor's degree
  + Master's degree
  + Doctoral degree
  + Trade/Vocational certification
  + Prefer not to say

**Occupation**

* Prompt: "What's your job title or occupation?"
* Input Type: Text field with autocomplete suggestions
* Placeholder: "Software Engineer, Teacher, Manager, etc."

**Industry**

* Prompt: "Which industry do you work in?"
* Input Type: Dropdown with search
* Options: Standard industry classifications (Technology, Healthcare, Education, etc.)

**Years of Experience**

* Prompt: "How many years of work experience do you have?"
* Options:
  + Less than 1 year
  + 1-3 years
  + 4-7 years
  + 8-12 years
  + 13-20 years
  + 20+ years

**Financial Goals & Preferences**

**Primary Financial Goal**

* Prompt: "What's your most important financial goal right now?"
* Options:
  + Building an emergency fund
  + Paying off debt
  + Saving for a house
  + Retirement planning
  + Investing for growth
  + Starting a business
  + Education funding
  + Other

**Risk Tolerance**

* Prompt: "How comfortable are you with investment risk?"
* Subtitle: "Think about how you'd feel if your investments lost value temporarily"
* Options:
  + Conservative (I prefer stable, low-risk investments)
  + Moderate (I'm okay with some risk for potentially higher returns)
  + Aggressive (I'm comfortable with high risk for potentially high returns)
  + I'm not sure

**Financial Knowledge Level**

* Prompt: "How would you rate your financial knowledge?"
* Options:
  + Beginner (I'm just starting to learn about finances)
  + Intermediate (I understand basic financial concepts)
  + Advanced (I'm comfortable with complex financial strategies)
  + Expert (I have extensive financial knowledge)

**Preferred Contact Method**

* Prompt: "How would you like us to contact you?"
* Options:
  + Email only
  + Text messages only
  + Phone calls only
  + Email and text messages
  + All methods
  + No contact unless urgent

**Notification Preferences**

* Prompt: "What types of notifications would you like to receive?"
* Checkboxes:
  + Weekly financial insights
  + Monthly spending summaries
  + Goal progress updates
  + Bill payment reminders
  + Market updates
  + Educational content
  + Product updates

**Health & Wellness**

**Health Check-in Frequency**

* Prompt: "How often would you like to check in about your wellness?"
* Subtitle: "We believe financial and physical health are connected"
* Options:
  + Daily
  + Weekly
  + Monthly
  + Only when I choose
  + Never

**Stress Level Baseline**

* Prompt: "On average, how stressed do you feel about money?"
* Scale: 1-10 slider (1 = Not stressed at all, 10 = Extremely stressed)

**Wellness Goals**

* Prompt: "What wellness goals are you working on?"
* Checkboxes:
  + Reducing financial stress
  + Improving work-life balance
  + Building better habits
  + Managing anxiety
  + Improving physical health
  + None currently

**🟢 NICE TO HAVE FIELDS - Enhanced Features**

**Advanced Financial Data**

**Investment Portfolio Value**

* Prompt: "Do you have investments outside of retirement accounts?"
* Follow-up: "What's the approximate value?"
* Options: Yes/No toggle, then currency field

**Insurance Coverage**

* Prompt: "What types of insurance do you have?"
* Checkboxes:
  + Health insurance
  + Life insurance
  + Disability insurance
  + Auto insurance
  + Home/Renters insurance
  + None

**Retirement Account Balance**

* Prompt: "What's your approximate retirement account balance?"
* Subtitle: "Include 401(k), IRA, etc."
* Options: Currency field or "I don't have retirement accounts"

**Real Estate Holdings**

* Prompt: "Do you own real estate?"
* Options:
  + Primary residence
  + Investment property
  + Both
  + Neither

**Business Ownership**

* Prompt: "Do you own a business or have business income?"
* Options: Yes/No toggle with follow-up questions

**Career & Professional Development**

**Job Satisfaction**

* Prompt: "How satisfied are you with your current job?"
* Scale: 1-5 stars with labels (Very unsatisfied to Very satisfied)

**Career Goals**

* Prompt: "What are your career aspirations?"
* Checkboxes:
  + Promotion in current role
  + Career change
  + Starting own business
  + Developing new skills
  + Work-life balance improvement
  + Early retirement

**📊 ANALYSIS-SPECIFIC PROMPTS**

**Financial Health Scoring**

**Emergency Fund Assessment**

* Prompt: "How many months of expenses could you cover with your current savings?"
* Options:
  + Less than 1 month
  + 1-3 months
  + 4-6 months
  + 7-12 months
  + More than 12 months
  + I'm not sure

**Budget Tracking**

* Prompt: "Do you currently track your spending?"
* Options:
  + Yes, very detailed tracking
  + Yes, basic tracking
  + Sometimes
  + No, but I want to start
  + No, and I'm not interested

**Spending Patterns**

* Prompt: "Which best describes your spending style?"
* Options:
  + I stick to a strict budget
  + I have a loose budget I mostly follow
  + I spend consciously but don't budget formally
  + I spend impulsively sometimes
  + I often overspend

**Personalization Preferences**

**Analysis Depth**

* Prompt: "How detailed would you like your financial insights to be?"
* Options:
  + Simple summaries and highlights
  + Moderate detail with explanations
  + Comprehensive analysis with deep insights

**Learning Style**

* Prompt: "How do you prefer to learn about financial topics?"
* Checkboxes:
  + Reading articles and guides
  + Watching videos
  + Interactive tools and calculators
  + Podcasts or audio content
  + One-on-one guidance
  + Group discussions

**🔧 TECHNICAL & COMPLIANCE PROMPTS**

**Privacy & Data Preferences**

**Data Sharing Consent**

* Prompt: "How comfortable are you with data sharing for improved insights?"
* Options:
  + Share anonymized data to improve the platform
  + Keep my data completely private
  + I need more information to decide

**GDPR Compliance** (if applicable)

* Prompt: "We need your consent to process your financial data"
* Checkbox: "I consent to the processing of my personal data as described in the Privacy Policy"
* Link: "Read our Privacy Policy"

**Data Retention Preferences**

* Prompt: "How long would you like us to keep your financial data?"
* Options:
  + As long as I have an account
  + 5 years after account closure
  + 2 years after account closure
  + Delete immediately upon account closure

**📱 IMPLEMENTATION NOTES**

**User Experience Guidelines**

1. **Progressive Data Collection**: Collect critical fields first, then gradually request additional information over time
2. **Optional Field Indicators**: Clearly mark which fields are required vs. optional
3. **Privacy Reassurance**: Include brief explanations of why data is needed and how it's protected
4. **Skip Options**: Allow users to skip non-critical fields and return later
5. **Save Progress**: Enable users to save and continue later for longer forms

**Validation & Error Messages**

* **Required Field**: "This field is required to continue"
* **Invalid Format**: "Please enter a valid [field type]"
* **Out of Range**: "Please enter a value between [min] and [max]"
* **Privacy Concern**: "We keep all your information secure and never share personal details"

**Accessibility Considerations**

* Include proper labels and ARIA descriptions
* Ensure keyboard navigation support
* Provide clear instructions for screen readers
* Use sufficient color contrast
* Offer alternative input methods when possible