**File Analysis Dashboard Design Document**

**Overview**

The File Analysis Dashboard is a central component of the Airiam RAG Service, enabling users to upload, organize, and manage documents that will be processed using RAG (Retrieval-Augmented Generation) capabilities. This dashboard serves as the document management hub where users can upload local files, connect to cloud storage providers, tag and categorize documents, and prepare them for use in chat contexts.

This document outlines the functionality, design elements, and implementation details for the File Analysis Dashboard. It provides developers with a clear understanding of components, interactions, and expected user experience. Each UI element is described with its purpose, behavior, and technical implementation requirements.

The File Analysis Dashboard is critical for the system's overall functionality as it provides the knowledge base that powers the RAG capabilities. The quality and organization of documents managed through this interface directly impact the quality of AI-generated responses in the chat interface.

**Dashboard Components and Functionality**

**1. File Analysis Main Page**

**Header Section**

* **Title**: Displays "File Analysis" in a prominent font (text-2xl, font-semibold)
* **Add Files Button**:
  + Primary button with "+" icon and "Add Files" text in the top-right corner
  + When clicked, opens the Add Files Modal
  + Triggers file upload workflow
* **Delete Files Button**:
  + Only visible when files are selected
  + Danger/red variant button with trash icon
  + Shows count of selected files ("Delete 3 files")
  + When clicked, shows confirmation dialog before deletion

**View Controls**

* **Grid/List Toggle**:
  + Located in the top-right area below the header
  + Two connected buttons for switching between grid and list views
  + Active view is highlighted with a primary color background
  + Grid view shows file cards in a responsive grid layout
  + List view shows files in a table with more detailed information

**File Display Area**

* **File Grid View**:
  + Responsive grid (1 column on mobile, 2-4 columns on larger screens)
  + Each file displayed as a card with icon, name, upload date, status, tags, and actions
  + Selected files have highlighted border/styling
  + Shows file status badge (processing, indexed, error)
  + Shows up to 3 tags per file with "+X more" indicator if needed
  + Three action buttons: View, Tags, Delete
* **File List View**:
  + Table layout with columns for selection checkbox, name, type, tags, date, status, and actions
  + Sortable columns with appropriate indicators
  + Status displayed as color-coded badges
  + Action buttons for View and Delete
  + Row highlighting on hover and for selected files

**Empty State**

* **Displayed when**: No files have been uploaded yet
* **Content**:
  + Document icon
  + "No files found" title
  + "Upload files to start analyzing your documents" description
  + Empty state should be visually distinctive (light background, centered content)

**2. Add Files Modal**

**Modal Header**

* **Title**: "Add Files" in the top-left corner
* **Close Button**: "X" icon in the top-right that closes the modal

**Tab Navigation**

* **Upload Files Tab**:
  + Default selected tab
  + Shows local file upload interface
  + Tab has icon of a document with up arrow
* **Connect Cloud Tab**:
  + Alternative tab for cloud storage connector
  + Tab has icon of a cloud with up arrow
  + Shows cloud provider selection when active

**Upload Files Interface**

* **Dropzone Area**:
  + Large area with dashed border
  + "Drag and drop files here" text
  + "browse files" clickable text
  + File size and count limitations noted
  + Visual feedback when dragging files over the area
  + Handles both drag-and-drop and click-to-browse
* **Selected Files List**:
  + Shows files selected for upload
  + Each file shows name, type icon, and size
  + Displayed only after files are selected
* **Upload Progress**:
  + Progress indicator shown during upload
  + "Uploading..." text with spinner

**Cloud Provider Selection**

* **Provider Grid**:
  + 2x2 grid of provider cards (Google Drive, OneDrive, Dropbox, SharePoint)
  + Each card has provider logo and name
  + Selected provider has highlighted border/styling
  + Clicking a card selects that provider and shows the connector interface
* **Cloud Connector Interface**:
  + Authentication button if not authenticated
  + File browser for navigating cloud storage
  + Checkboxes for selecting files
  + Back button to return to provider selection
  + Breadcrumb navigation for folder structure

**Options Section**

* **Store Full Content Checkbox**:
  + Option to store complete document content in vector DB
  + Tooltip explaining the tradeoff (faster but uses more storage)
* **Suggest Tags Checkbox**:
  + Option to use AI for automatic tag suggestion
  + Default checked

**Action Buttons**

* **Cancel Button**: Closes the modal without uploading
* **Upload/Connect Button**:
  + Primary button that triggers file upload or cloud connection
  + Text changes based on the selected tab
  + Disabled until files are selected
  + Shows loading state during upload/connection process

**3. File Detail View**

**Header Section**

* **Back Button**: Returns to file list
* **File Name**: Primary title showing the file name
* **File Metadata**: Size, type, upload date displayed as secondary information
* **Status Badge**: Shows processing status (processing, indexed, error)

**Content Preview**

* **Document Viewer**:
  + Preview of document content when possible
  + Fallback to icon and "No preview available" for unsupported types
  + Scrollable with pagination for multi-page documents

**Metadata Panel**

* **Tags Section**:
  + List of applied tags with color coding
  + Edit button to modify tags
  + Tag suggestions from AI (if enabled)
  + Interface to accept/reject suggested tags
* **Categories Section**:
  + List of applied categories with color coding
  + Edit button to modify categories
* **Source Information**:
  + Shows if the file is uploaded or from cloud storage
  + For cloud files, shows provider and external link if available

**Actions Panel**

* **Delete Button**: Removes the file after confirmation
* **Update Button**: Re-processes the file if needed
* **Download Button**: Downloads the original file if available
* **Use in Chat Button**: Creates a new chat with this file as context

**4. Tag Management Modal**

**Modal Header**

* **Title**: "Manage Tags" or "Manage Categories" based on context
* **Close Button**: "X" icon that closes the modal

**Tag/Category Selection**

* **Available Tags List**:
  + Scrollable list of all available tags/categories
  + Each tag shows name and color indicator
  + Search input to filter the list
  + Selected state for applied tags
* **Create New Tag Interface**:
  + Input field for new tag name
  + Color picker for tag color
  + Add button to create the new tag

**Action Buttons**

* **Cancel Button**: Closes the modal without saving changes
* **Save Button**: Applies the selected tags/categories to the file

**Testing Procedures**

**1. File Analysis Main Page Testing**

**Header Testing**

1. **Title Display Test**:
   * Verify that "File Analysis" is displayed in the header with the correct styling
2. **Add Files Button Test**:
   * Click the "Add Files" button
   * Verify that the Add Files Modal opens
   * Verify that the button has the correct icon and styling
3. **Delete Files Button Test**:
   * Verify the button is hidden when no files are selected
   * Select multiple files and verify the button appears with the correct count
   * Click the button and verify the confirmation dialog appears
   * Confirm deletion and verify selected files are removed

**View Controls Testing**

1. **Grid/List Toggle Test**:
   * Click the Grid view button and verify files display in a grid layout
   * Click the List view button and verify files display in a table layout
   * Verify the active view button is highlighted correctly
   * Switch views multiple times to ensure consistency

**File Display Testing**

1. **Grid View Test**:
   * Verify files appear as cards with correct information (name, date, status, tags)
   * Verify file icons match file types
   * Select a file and verify the selection styling
   * Test action buttons (View, Tags, Delete) for functionality
   * Verify responsive layout at different screen sizes
2. **List View Test**:
   * Verify files appear in table rows with all columns visible
   * Test the selection checkbox functionality
   * Verify status badges display correctly
   * Test action buttons for functionality
   * Verify hover effects on rows
3. **File Status Display Test**:
   * Upload a new file and verify it shows "processing" status
   * Wait for indexing to complete and verify it changes to "indexed"
   * (If possible) Create an error condition and verify "error" status
4. **Empty State Test**:
   * Remove all files and verify the empty state is displayed with correct content

**2. Add Files Modal Testing**

**Modal Controls Testing**

1. **Open/Close Test**:
   * Click "Add Files" to open the modal
   * Click the X button to close it
   * Re-open and click outside the modal to verify it closes
   * Re-open and click Cancel to verify it closes
2. **Tab Navigation Test**:
   * Verify "Upload Files" is the default selected tab
   * Click "Connect Cloud" and verify the view changes
   * Switch between tabs multiple times to ensure proper state management

**Upload Files Testing**

1. **Dropzone Functionality Test**:
   * Drag files over the dropzone and verify visual feedback
   * Drop files and verify they appear in the selected files list
   * Click "browse files" and select files through the file dialog
   * Verify file type restrictions (if implemented)
   * Try a file exceeding size limits and verify appropriate error
2. **Upload Process Test**:
   * Select files and click Upload
   * Verify upload progress indicator appears
   * Verify files appear in the main view after successful upload

**Cloud Connection Testing**

1. **Provider Selection Test**:
   * Click each provider card and verify selection state changes
   * Verify the connector interface appears for the selected provider
2. **Authentication Test**:
   * Click authentication button
   * Verify OAuth flow launches and completes
   * Verify file browser appears after successful authentication
3. **File Selection Test**:
   * Navigate folders in the file browser
   * Select multiple files using checkboxes
   * Click "Import Files" and verify they appear in the main view

**Options Testing**

1. **Store Full Content Option Test**:
   * Toggle the checkbox and verify state changes
   * Upload files with option on/off and verify storage behavior difference if possible
2. **Suggest Tags Option Test**:
   * Toggle the checkbox and verify state changes
   * Upload files with option on/off and verify tag suggestions appear/don't appear

**3. File Detail View Testing**

**Navigation Testing**

1. **Access Test**:
   * Click "View" on a file card/row
   * Verify navigation to detail view
   * Click Back and verify return to main view

**Content Display Testing**

1. **Preview Test**:
   * Verify document content displays for supported file types
   * Verify fallback for unsupported types
   * Test pagination controls for multi-page documents
2. **Metadata Display Test**:
   * Verify file name, size, type, and upload date are correct
   * Verify status badge is accurate
   * For cloud files, verify source information is correct

**Tag/Category Testing**

1. **Tag Display Test**:
   * Verify all tags are displayed with correct colors
   * Click Edit and verify tag management modal opens
   * Add/remove tags and verify changes are reflected
2. **AI Tag Suggestions Test**:
   * For a newly uploaded file (with suggestions enabled)
   * Verify suggested tags appear with confidence indicators
   * Accept a suggestion and verify it's added to applied tags
   * Reject a suggestion and verify it's removed from suggestions

**Action Testing**

1. **Button Functionality Test**:
   * Test Delete button with confirmation dialog
   * Test Download button to verify file retrieval
   * Test "Use in Chat" button to verify it creates a new chat with file context

**4. Tag Management Modal Testing**

**Modal Display Testing**

1. **Open/Close Test**:
   * Click Edit in the tags section to open the modal
   * Click the X button to close it
   * Re-open and click Cancel to verify it closes
2. **Tag List Test**:
   * Verify all available tags are displayed
   * Verify file's current tags are shown as selected
   * Search for specific tags and verify filtering works
3. **Tag Creation Test**:
   * Enter a new tag name
   * Select a color
   * Click Add and verify the new tag appears in the list
   * Select the new tag and save to verify it's applied to the file

**Save Functionality Test**

1. **Changes Persistence Test**:
   * Make multiple tag selections/deselections
   * Click Save
   * Verify changes are reflected in the file detail view
   * Navigate away and back to verify changes were saved to the server