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MemoLink

# Project Overview

## Project Summary

- Our project proposes the development of a Digital Memory Keeper application designed to modernize the traditional family photo album by integrating personal reflection in an organized digital space.

## Problem Statement

- Current memory-keeping methods are not so practical: Physical photo albums are easily and permanently destroyed, while digital photos are disorganized and lack the crucial personal thoughts and emotional context necessary for meaningful retrieval.
- This means families and individuals risk losing their most cherished milestones because the memories are either physically vulnerable or digitally fragmented and meaningless.
- We lack a dedicated platform that allows users to permanently merge photos with personal reflections to build cohesive, lasting narratives.

## Target Users

- Families with Young Children: Seeking a secure, organized way to document and narrate their children's milestones (first words, daily life, growth) in detail.
- Individuals & General Users: Anyone looking for a dedicated digital space to combine and permanently preserve their personal memories, photos, and private thoughts/reflections.

## Core Features

- Memory Packages: A single, unified unit that combines photos and videos with the user's personal thoughts and reflections.
- Connections (Narrative Linking): The ability to link multiple Memory Packages together to create continuous stories or timelines (e.g., from an event's beginning to its end).

- **Archiving & Retrieval:** A system for digital storage, organization, and efficient searching of all saved packages.

### **What Makes It Unique ?**

- Our platform is the only solution that guarantees the preservation of why the photo was taken (the thought/reflection) and how it connects to other life events (the connection/narrative), solving the problem of digitally scattering precious memories.

### **Comparison With Competitors**

- **Cloud Storage/Google Photos:** Excellent for storing photos, but it is purely file-based. The emotional context and reflection are absent, and memories are isolated, not connected to form a narrative.
- **Family Album:** is primarily a photo-sharing app that organizes memories automatically by date.
- Our app, however, is unique because it forces the permanent combination of a photo with a personal thought into a single "Memory Package". This allows users to create connected, continuous life stories rather than just a disorganized collection of files, offering deep personal context that simple chronological sharing cannot match.

### **Monetization Plan**

- Full access on the first month, then subscription plan. Not denying full access, but limiting the amount of mempacks, albums and edges.

## **Technology Stack**

### **Technologies and Tools**

- FastAPI (Python) for the API, PostgreSQL for data, SQLAlchemy (ORM), Alembic (migrations), JWT for login, Docker, Git/GitHub, GitHub Actions (CI), auto API docs via OpenAPI/Swagger.

### **Frameworks or Libraries: Backend**

- FastAPI - modern, fast, and designed for JSON APIs ; it generates documentation automatically and pairs cleanly with a React frontend.

## **Frameworks or Libraries: Frontend**

- We will use React.js because it's fast, component-based, and perfect for creating interactive interfaces such as graphs with clickable photos.
- React Flow: For building interactive graph structures where each node can display an image and respond to clicks.
- Tailwind CSS: For fast, modern, and responsive UI styling without writing complex CSS.
- Framer Motion: For smooth animations and transitions, like opening or closing the photo popup.
- Axios: For handling API requests between the frontend and backend easily and reliably.
- React Modal (or Radix UI): For displaying popups that show the enlarged image and memory text.

## **Programming Language**

- Python - We're proficient; it speeds development and has mature libraries for web APIs and databases.
- Programming Language: We will use JavaScript (optionally TypeScript) because it's the standard for web development, works seamlessly with React, and is ideal for building dynamic, user-friendly web applications.

## **Service Providers**

- Supabase Storage for photo files; Supabase Postgres (managed PostgreSQL) if we don't run the DB ourselves.
- Why? Simple setup, free tier, and built-in security for private/public files ; reduces DevOps work so we can focus on features.

## **Database and System**

- SQL / PostgreSQL – our data is relational (users , notes , photos , note note links ). We need constraints, joins, and reliable migrations.

## **Tools for Hosting**

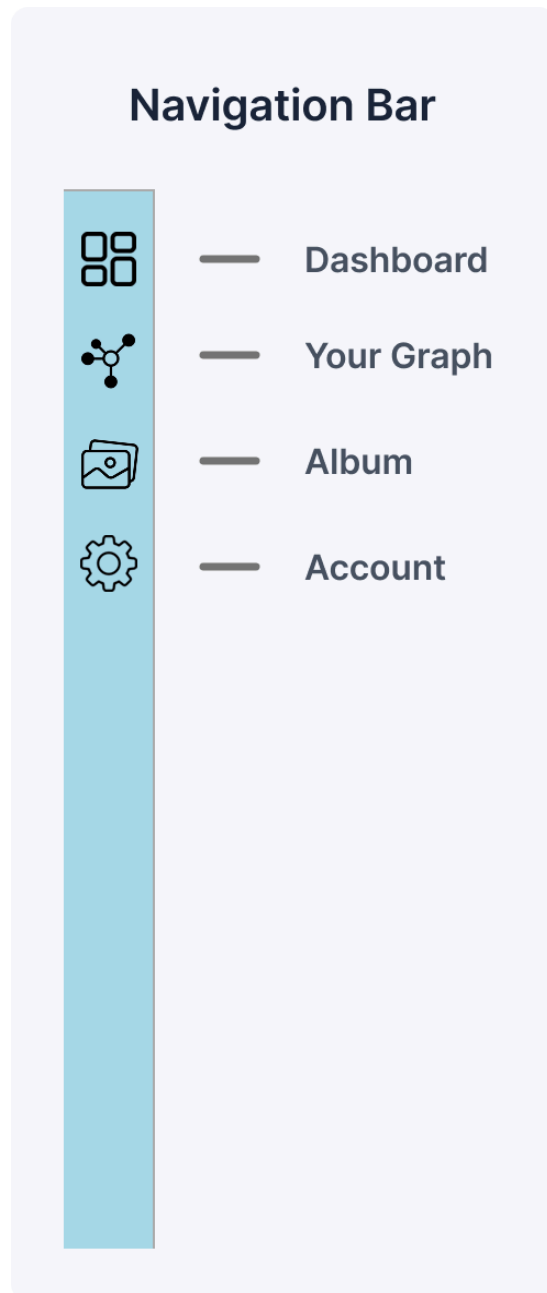
- Backend on Render (runs FastAPI 24/7), Database on Supabase Postgres.
- Git/GitHub for version control; REST over HTTPS with OpenAPI docs.

## Fitting of Technology Choices to our Team

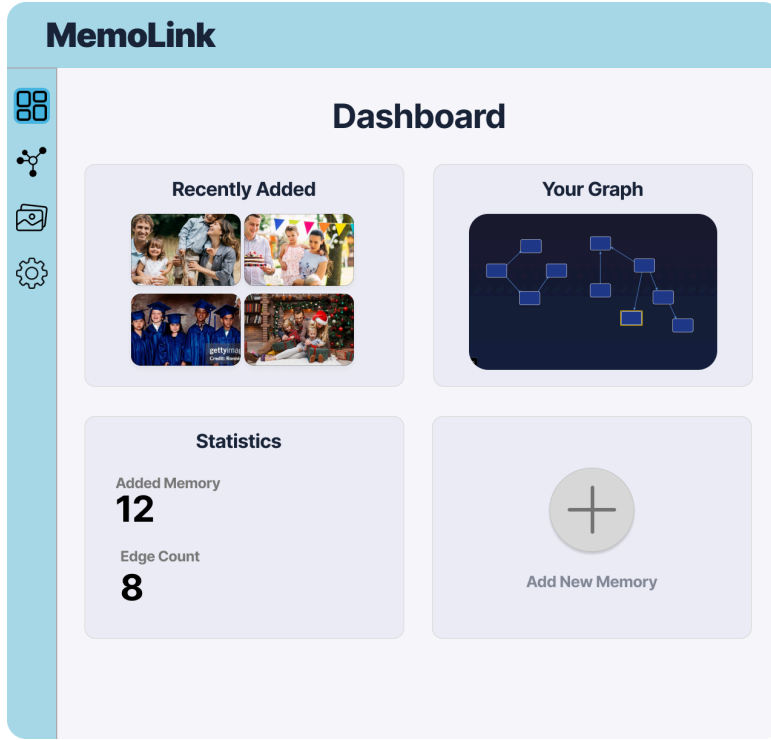
- React needs a clean JSON API → FastAPI fits. We have experience with Python → faster, safer delivery.
- PostgreSQL ensures data integrity for linked notes/photos. Supabase + Render minimize ops risk and are easy to demo.

# Initial Design

## Navigation Bar



## Dashboard







## MemGraph




## Your Album

# MemoLink




## Your Album




**Memory 1**

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**Memory 6**

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Enter your memory's title

Add Image

Enter your memory's details

Cancel

Add Memory

## Memory Detail View



### Memory 3

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Add Memory



## Development Setup

### GitHub Repository Link

- <https://github.com/AlkBerkaySeucen/YZM2021-Team-3>

### GitHub Project

- <https://github.com/users/AlkBerkaySeucen/projects/3>