MICHIGAN STATE
U N I V E R S I T Y

Project Plan Presentation
Cereal Industry Analysis Tool using Generative AI

The Capstone Experience

Team WK Kellogg Co

Suryansh Singh
Roshni Kaur
Shubh Sharma
Anand Pinnamaneni
Daniel Flanagan
Samin Matin

Department of Computer Science and Engineering
Michigan State University

Fall 2024

From Students…
…to Professionals

Project Sponsor Overview

- Global leader in the food industry, specializing in cereals, snacks, and convenience foods.
- Produce Iconic brands like Corn Flakes, Froot Loops, and Krave.
- Focused on innovation in nutrition and sustainability in over 180 countries around the world
- Meaningful Analysis needed to thrive in this industry, company state needs to be understood fast and decision-making quicker

Project Functional Specifications

- Aim to automate analysis of cereal company annual reports and financial statements.

- Use this data to train a model capable of answering complex questions on given companies

- Should be able to summarize major industry changes like mergers, acquisitions.

- Deliver actionable summaries for companies to act upon

- Industry Analysts and financial professionals are the intended target audience
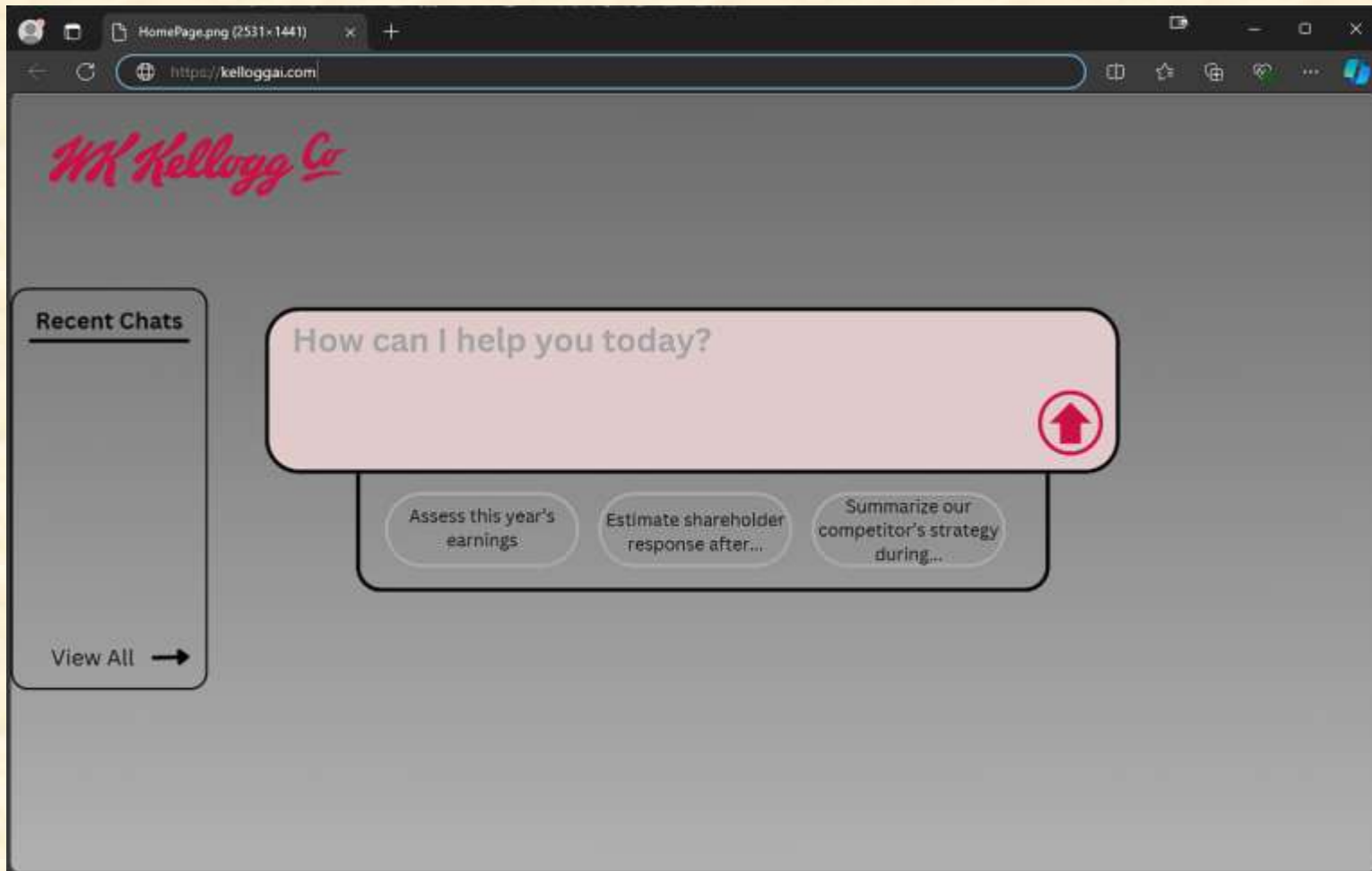
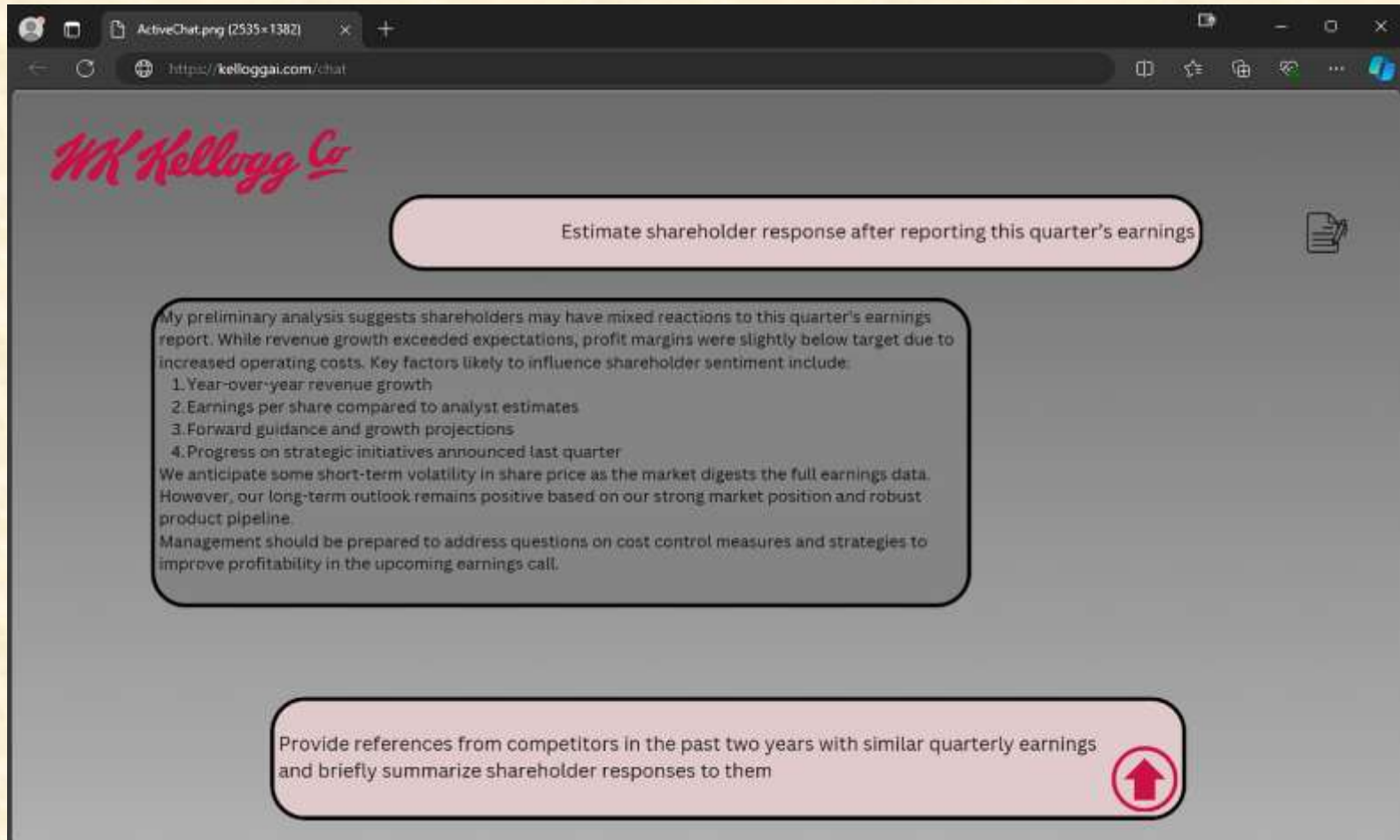# Project Design Specifications

- Streamlit-Embedded Web App

- Simple but Versatile UI

- Past Chat Accessible

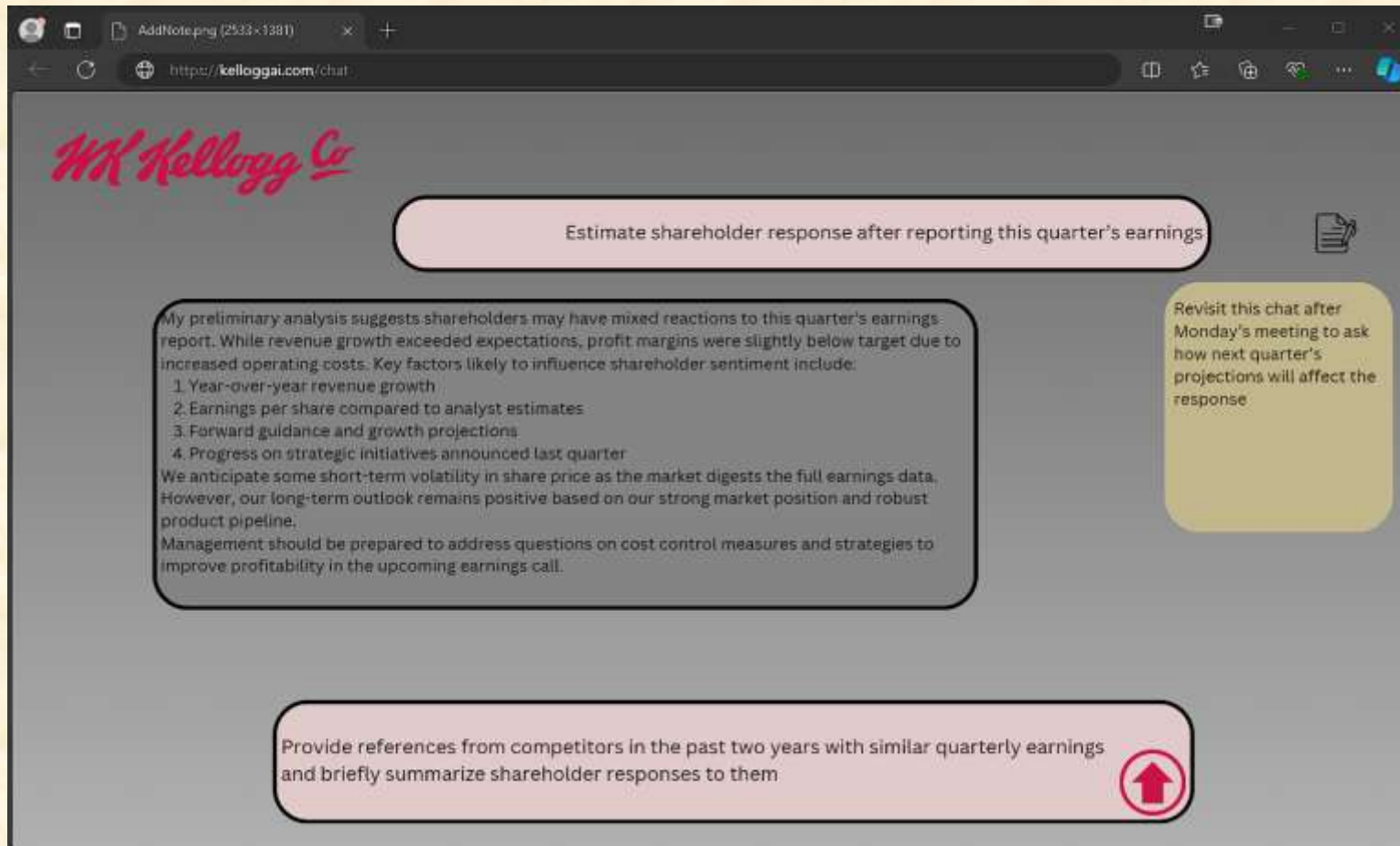- Chat Recommendation for Swift Prompting

- Add and View Notes
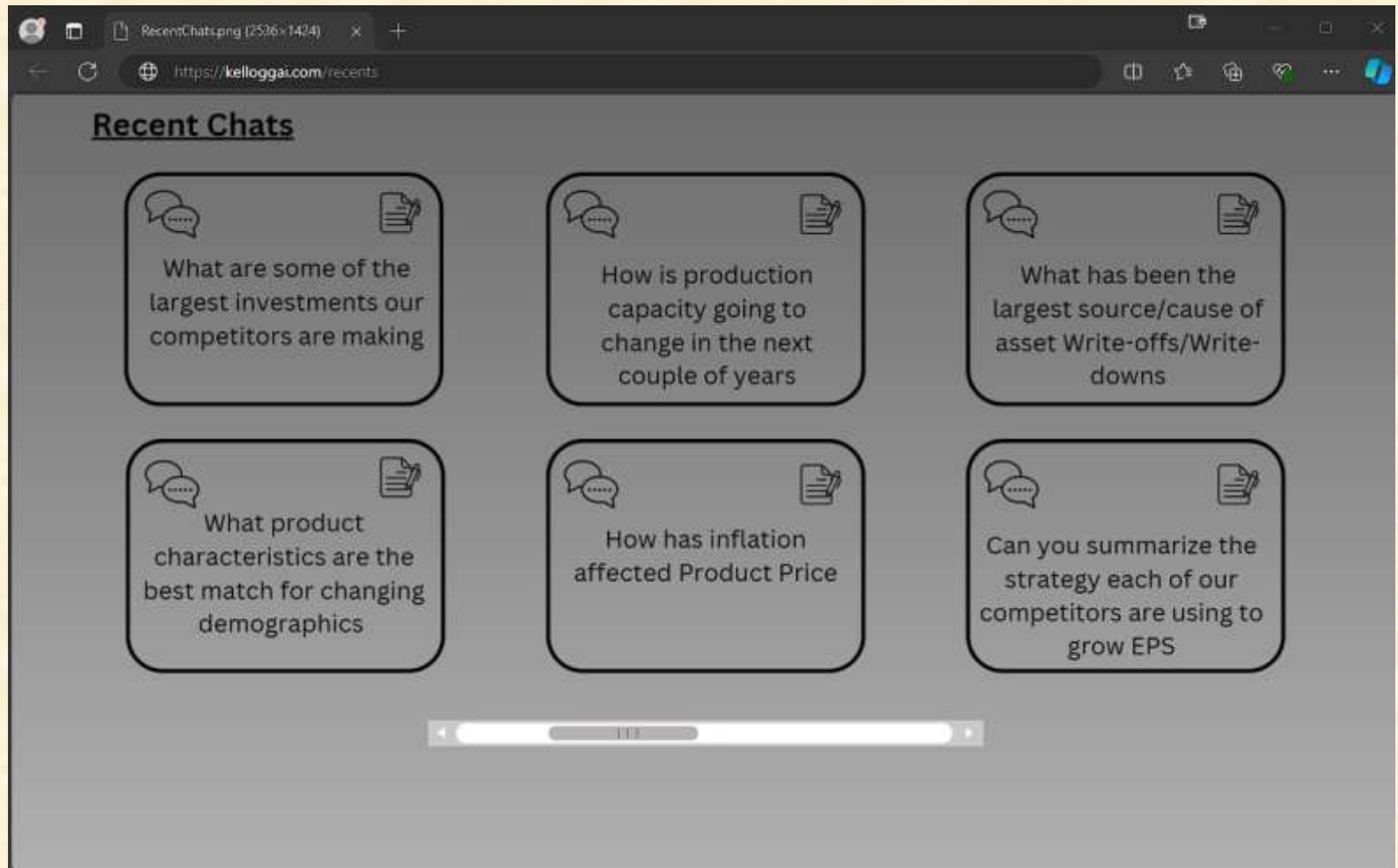
Screen Mockup: Home Page
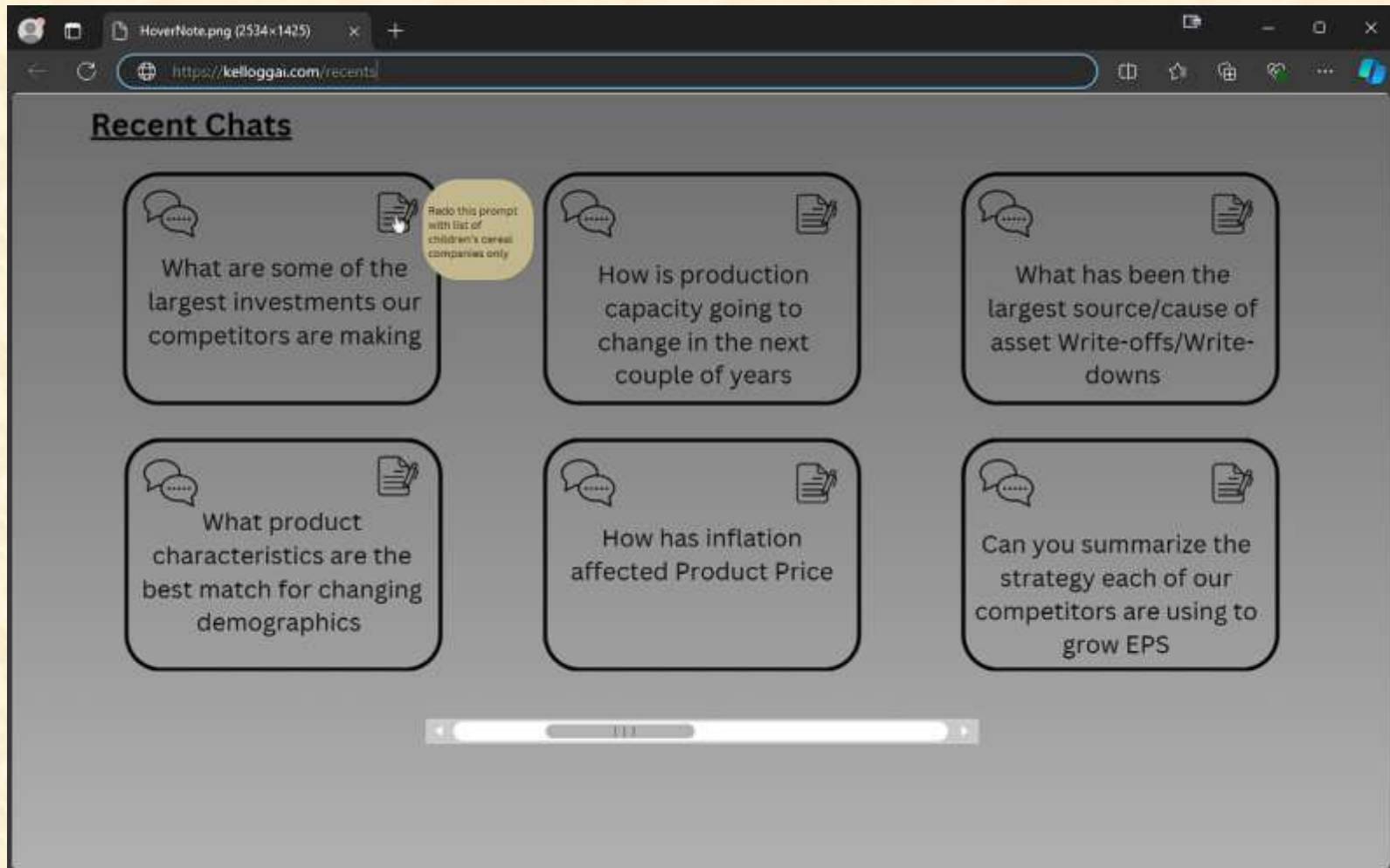
Screen Mockup: Chat Page

Screen Mockup: Add Note Interface

Screen Mockup: Recent Chats

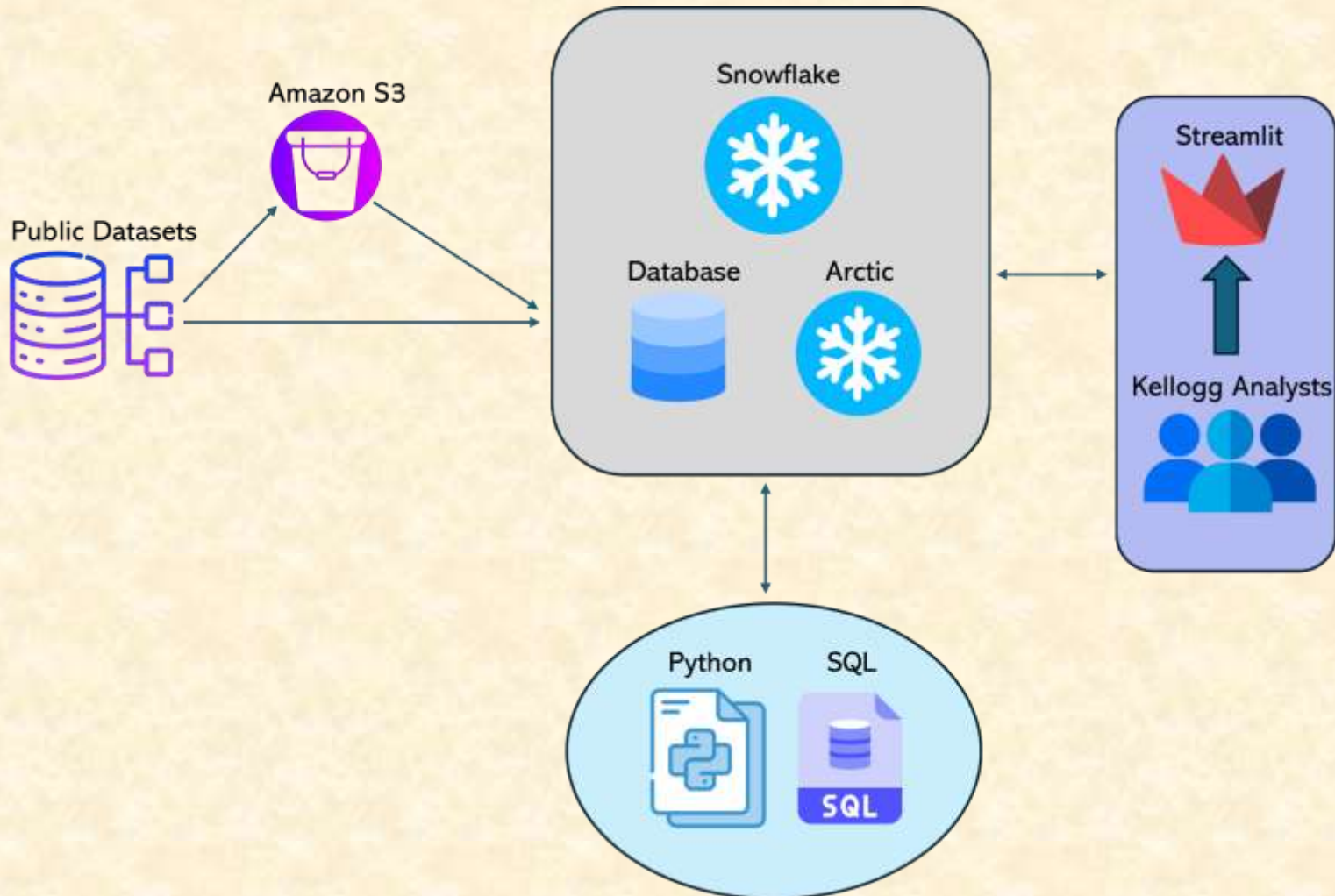# Screen Mockup: Hover Note Interface

Project Technical Specifications

- Snowflake

- Snowflake Arctic

- Amazon AWS S3 Storage

- SQL

- Python

- Streamlit

Project System Architecture

Project System Components

- Hardware Platforms
  - None

- Software Platforms / Technologies
  - Snowflake
  - Snowflake Arctic
  - Python
  - SQL
  - Streamlit

Project Risks

- Clean and Quality Data
  - Ensuring data is proper for the model
  - Robust gathering and maintaining of data
- LLM Integration
  - Using our AI/LLM with Snowflake
  - Utilizing the proper model
- Relations with Datasets and Prompt Value
  - Making sure the model is useful to the client
  - Evaluating the data in relation to financial/economic concepts

Questions?

? ? ? ?

? ?

? ? ?