

# Personal Finance Chatbot

## Overview

The Personal Finance Chatbot is designed to provide users with tailored financial advice based on their demographic (Student or Professional) and their queries. It covers budgeting, tax, and investment guidance in an easy-to-understand manner, ensuring users get practical insights for financial planning.

## Key Features

Dynamic financial calculations for budgets, taxes, and investments. Interactive user interface built with Gradio. Tabular output for clear breakdown of financial categories. Custom responses tailored for Students and Professionals. Powered by IBM Granite Embedding Model for future semantic enhancements.

## Technologies

The chatbot is implemented using the following technologies:

- **Transformers (Hugging Face):** For leveraging IBM Granite Embedding Model.
- **Gradio:** For building an interactive user interface.
- **Pandas:** For tabular data processing and visualization.
- **PyTorch:** Backend framework for model support.

## Work Flow

1. User selects their demographic (Student or Professional).
2. User enters a financial query (budget, tax, or investment).
3. The chatbot processes the query, applies financial rules, and generates a response.
4. A detailed table is displayed with category-wise breakdown and formulas.
5. The user receives financial guidance instantly.

## Improvements Over Previous Version

- Added IBM Granite Embedding Model integration for semantic enhancements.
- Enhanced user experience with interactive tables and tailored breakdowns.
- Improved clarity of financial formulas for transparency.
- More structured and modular codebase for scalability.

## **Conclusion**

The Personal Finance Chatbot serves as a helpful tool for individuals seeking quick, personalized financial advice. By leveraging modern AI models and intuitive interfaces, it empowers users to make smarter decisions regarding budgeting, taxes, and investments.