Business Brief

BAX 493A - Python LLM: Final Project

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A Retrieval-Augmented Product-Facing Assistant for Your Daily 'How-To' Queries

I. Problem

General-purpose LLMs often give vague or hallucinated answers to everyday questions like "How do I clean baby bottles?" or "How to sanitize a cutting board?" These answers might sound convincing, but they're not always safe or accurate. For users like parents, pet owners, or caregivers, the cost of a bad answer is high.

II. Value Proposition

This Product-Facing Assistant solves this by combining the speed of language models with the accuracy of real-world guidance from WikiHow. It is a simple chatbot that answers how-to questions using verified, crowd-curated instructions, without needing fine-tuning or private APIs.

III. What It Delivers

- Factual, grounded, multi-step answers to common queries.
- Answers are based on WikiHow's practical "how-to" articles.
- Easy to run, even for non-engineers.

IV. Core Personas: Who Would Use It

- Voice assistant or smart speaker companies.
- EdTech or DIY platforms.
- Low-resource chatbots targeting household or consumer support.

V. Novelty: Why is this Unique?

Unlike typical RAG demos that use legal or academic datasets, this assistant focuses on everyday usability, helping users with things they might actually Google daily. It feels personal and relatable.

VI. Deployment Readiness

- Lightweight pipeline runs on CPU in under 3s
- Uses open models and datasets (therefore, no API costs)
- One-click deployment HuggingFace spaces

VII. Business ROI

- Reduces hallucination-related user complaints
- Boosts trust in AI assistants via fact-grounding
- Can scale horizontally by swapping in other how-to or instructional domains (like, StackExchange, Instructables)