

Overview

To streamline and automate the process of creating SOAP (Subjective, Objective, Assessment, Plan) notes for veterinary patients by leveraging ChatGPT, private knowledge bases, and patient management portals. The goal is to enhance efficiency, reduce manual workload, and improve accuracy in patient documentation, thereby enabling veterinarians to focus more on patient care.

Problem Statement

- Creating SOAP notes manually is a tedious process that consumes valuable time, leading to decreased efficiency.
- Veterinarians must gather patient history from multiple systems or platforms, which can result in incomplete or inaccurate documentation.

Solution

- The solution is a web browser extension that automates the creation of SOAP notes by extracting patient history, utilizing GPT-4 and a private knowledge base for contextual understanding, and integrating seamlessly with veterinary EHR systems like IDEXX Neo and Ezyvet.

Core Features

★ Automated SOAP Note Generation:

- The extension parses patient medical history from management portals and sends it to a backend API.
- The API utilizes GPT-4, enhanced with a Retrieval-Augmented Generation (RAG) model, to create accurate SOAP notes

★ Seamless Integration:

- The extension integrates with multiple patient management portals, ensuring wide applicability across veterinary practices.
- Automatically populates generated SOAP notes back into the respective management systems.

Challenges

- ✓ **Handling Large-Scale Veterinary Book Data (3,000+ Pages):**
The veterinary book contains extensive data, including diagnosis, physical symptoms, differential diagnoses, diagnostic tests, their results, and corresponding treatments for various medical conditions.
- ✓ **Integration with Multiple EHR Systems :** Integrating the solution with diverse EHR systems like IDEXX Neo and Ezyvet posed compatibility and interoperability challenges. Moreover, ensuring the generated SOAP notes were accurately populated back into the respective EHR systems required meticulous handling.
- ✓ **Ensuring Accuracy and Contextual Relevance of SOAP Notes:**
Generating SOAP notes required understanding the context of the patient history, including subjective and objective findings, while aligning them with appropriate assessments and treatment plans

Solution

- 💡 Implemented Retrieval-Augmented Generation (RAG) to efficiently handle large-scale data. Built vector embeddings of the book data using FAISS (or Pinecone for cloud-based vector storage) to enable quick and accurate retrieval of relevant information.
- 💡 Platform employs strict data protection measures, including encryption and compliance with industry standards like ISO 27001, ensuring that user data is stored and processed securely.
- 💡 Incorporated a knowledge-driven approach by combining patient history data with insights retrieved from the veterinary book.

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Screenshots

