Vibe Database Administration Assistant

System Architecture Overview

Frontend Layer
- Bootstrap 5 UI
- ChatGPT-style Interface
- JavaScript Client
- Real-time Chat
- File Downloads
- Table Views

HTTP Requests

Backend Services Layer (Flask)

Route Handlers
- Main Routes
- Auth Routes
- Database Routes
- AI Routes

Service Layer
- Database Manager
- AI Services
- Health Monitor
- PostgreSQL Manager

Models & ORM
- User Model
- Conversation Model
- Connection Model
- Health Check Model

Authentication
- Flask-Login
- Session Management
- User Roles

AI Processing   *DB Operations*

AI Integration Layer

Natural Language Processing
- Database Query Analysis
- Action Detection
- Intelligent Suggestions
- Conversation Processing

Database Connectivity Layer

Multi-DB Support
- SQLite
- PostgreSQL
- MS SQL (pymssql)

Operations
- Health Checks
- Space Analysis
- Schema Analysis

Data Queries

Data Storage Layer

Application Database

PostgreSQL
- Users & Sessions
- Conversations
- Connection Configs

Target Databases

Multi-Database Support
- Production Systems
- Development Environments

File Storage

Local Storage
- Reports (.txt)
- Logs
- Uploads

External Calls

External Systems

Cloud Services   Database Servers   File System

Legend:
- Frontend Layer
- Backend Services
- AI Integration
- External/Connectivity
- Data Storage

Key Technologies
- Flask Framework
- SQLAlchemy ORM
- Bootstrap 5 UI
- Natural Language AI
- Multi-DB Support
- PostgreSQL
- pymssql Connector