

English to Spanish Learning App

User Types

+-----+		
Student		
+-----+		
+-----v-----+		
Teacher		(Content Creation/Management, Curriculum Design)
+-----+		
+-----v-----+		
Content Creator		(Specialized Exercises/Content, Gamification)
+-----+		

Lang Portal

+-----+		
Word Groups		
Lesson Modules		
Grammar Explanations		
Cultural Insights		
Pronunciation Guides		(IPA, Audio)
Dialogue Practice		(Role-Playing Scenarios)
+-----+		
		Session Data, Progress Tracking
+-----v-----+		
Study Activities		
+-----+		
+-----v-----+		
* Writing Practice App		(Feedback on Style, Grammar)
* Text Adventure Game		(Interactive Story with Language Challenges)
* Visual Novel Reading		(Contextual Language Learning)
* Sentence Constructor		(Grammar Practice, Sentence Building)
* Visual Flashcards		(Vocabulary Learning with Images/Audio)
* Speak to Learn		(Speech Assessment)   (Pronunciation Feedback, Intonation Analysis)
* Personalized Quizzes		(Adaptive Learning)
* Cultural Simulations		(Virtual Immersion Experiences)
* AI-Powered Tutor		(Personalized Guidance, Explanations)
+-----+		

Data & Search

+-----+		
Database		
* Core Vocabulary		(English & Spanish, Audio Pronunciations)
* Grammar Rules		(Formal & Informal)
* Cultural Notes		(Etiquette, Idioms)
* Example Sentences		(Diverse Contexts)
+-----+		
		Query (Natural Language)
+-----v-----+		
Vector Database		(Sentence Embeddings, Contextual Info, User History)
* Faiss / Chroma		(Example Vector DBs)
+-----+		
		Retrieval

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58 +-----v-----+
59 | Cache | (Frequently Accessed
Embeddings/Responses, User Preferences)
60 +-----+
61 | RAG Pipeline
62 +-----v-----+
63 | RAG | (Retrieval & Generation
Orchestration, Personalization)
64 +-----+
65 | Prompt Engineering (Adaptive Prompts)
66 +-----v-----+
67 | Prompt Cache | (Optimized Prompts,
User-Specific Prompts)
68 +-----+
69 | Input (Text, Speech)
70 +-----v-----+
71 | Input Guardrails | (Profanity Filter, Toxicity
Check, Bias Detection, Privacy)
72 +-----+
73 | LLM
74 +-----v-----+
75 | LLM: Flan-T5-XXL / GPT-4 | (Text Generation &
Translation, Dialogue, Explanations)
76 +-----+
77 | Output (Text, Speech)
78 +-----v-----+
79 | Output Guardrails | (Grammar Check, Fact
Verification, Cultural Sensitivity, Plagiarism Check)
80 +-----+
81 | Response (Personalized Feedback,
Explanations, Translations)
82 +-----v-----+
83 | User | (Receives Personalized
Learning Content, Tracks Progress)
84 +-----+
85
86 Payment Plans
87 +-----+
88 | * Freemium | (Limited Access, Basic
Features)
89 | * Premium | (Full Access, Advanced
Features, Personalized Feedback, AI Tutor)
90 | * Subscription Based | (Monthly/Annual)
91 | * In-App Purchases | (For specific content or
features)
92 +-----+
93

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