AI LAB
by nvisia

JUSTIN BROWN

Local Small Language Model AI Assistant

Secure, Cost-Efficient Agentic Assistance

GOAL: POC of a local .NET-based SLM Assistant aiding with real-world business needs

This application is a .NET-based local AI agent designed to operate in a closed system without requiring internet access. The application acts as a recommendation and assistant tool for technical consulting firms, enabling natural language queries about projects and resources while providing intelligent recommendations; however, applications of a similar architecture could be used across the board and in many domains - even in privacy-sensitive environments, such as legal or healthcare organizations.

Using only native NuGet packages, the agent leverages Small Language Models (SLMs) to provide actionable recommendations and easy-to-use functionality using only the hardware on a standard developer laptop. Built for cost efficiency and security, this architecture ensures all data stays local and eliminates reliance on costly third-party AI services.

Highlights

- Purely .NET Stack
- Small Language Model
- Secure Local Deployment
- Cost-efficient and Privacy-first
- Clean, intuitive UI

Key Features

- Fully offline AI agent
- CPU-only execution with SLMs
- Router logic for intent detection
- RAG for context-aware answers
- Streamlined, modular .NET architecture for easy customization

Applicable Use Cases

- Delivering AI functionality in cost-sensitive contexts
- Navigating internal knowledge bases
- Assisting with project management
- Matching resources to projects
- Querying secure data in healthcare, legal, or other regulated environments

.NET nuget LLaMa Sharp Semantic Kernel SQLite

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Explore what happens when engineers get curious

The **AI Lab** is where nvisia's engineers and our clients experiment, explore, and build with the latest in AI and emerging tech. See real-world demos from our lab — not just ideas but functional innovations in:

- AI-powered software solutions
- Intelligent automation
- Data science & machine learning
- Custom AI integrations

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Engineering the Future with AI

Strategic Focus Areas

↘ Frameworks & Playbooks

Codifying reusable architectures and best practices for consistent, scalable AI delivery.

↘ Security & Compliance

Embedding data security, model integrity, regulatory alignment, and safe prompt engineering into every stage of the AI lifecycle.

↘ Human-in-the-Loop AI

Designing workflows where AI accelerates analysis and automation, while human oversight and expert review ensure accuracy, reliability, and real-world relevance.

↘ Responsible AI & Ethics

Creating principles, reviews, and tooling that ensure AI is transparent, fair, and aligned with organizational values.

↘ Driving Value

Prioritizing high-impact opportunities, measuring ROI, and ensuring AI initiatives deliver meaningful business outcomes.

↘ Improving Predictability

Using techniques such as Spec-Driven Development to enhance model accuracy, reproducibility, and trustworthiness.

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Ask questions, see the tech in action, or just chat with our team.
We're here to share what we've learned — and to learn from you too!

Real demos

Ready to scale

Built by engineers

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