

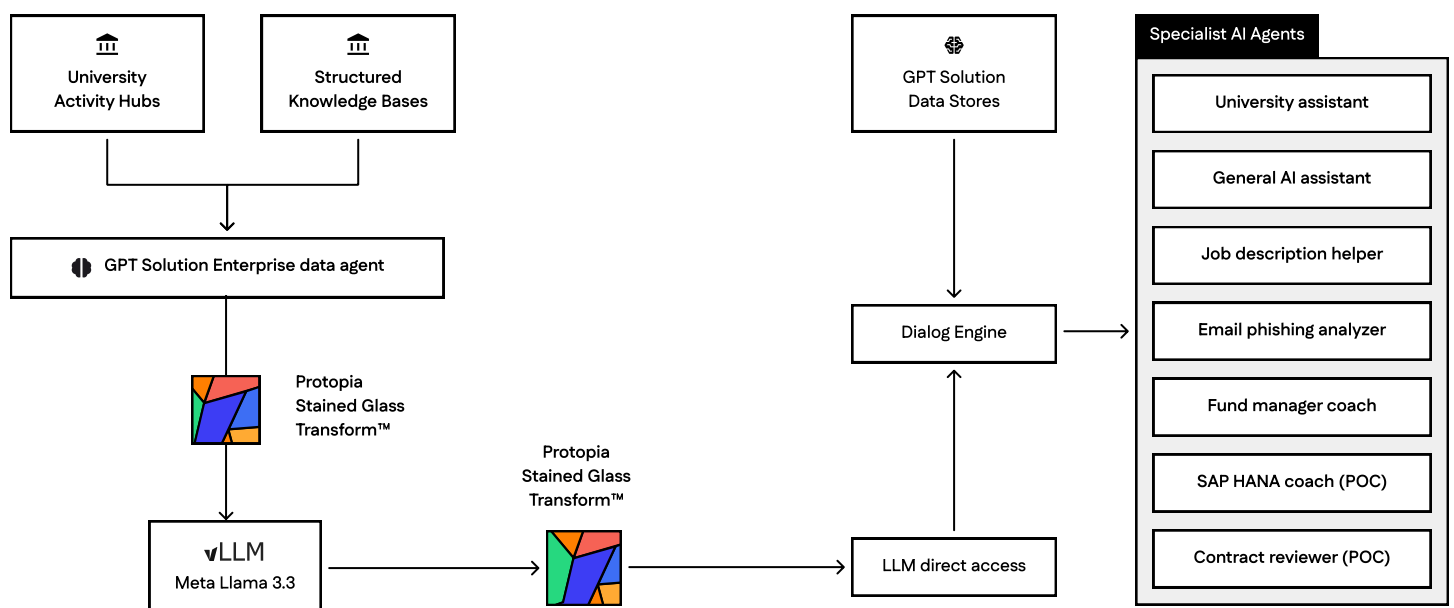
Transforming University Operations with AI-Powered Assistants

Overcoming Data Security Barriers for University Knowledge Systems

Universities generate vast amounts of institutional knowledge, from HR and finance policies to academic research and legal documents. However, these resources were fragmented across siloed systems, making it difficult for faculty, staff, and students to efficiently access the information they needed. Traditional AI solutions either lacked control over sensitive data or required proprietary, costly infrastructure that slowed adoption.

Deploying Secure AI Assistants with Protopia SGT & Meta Llama Models

Protopia partnered with leading research university US San Diego and Meta to build a secure, Llama-powered GPT solution that streamlines information retrieval and automates administrative processes across departments. By integrating Protopia's Stained Glass Transform (SGT), the university was able to ensure data privacy while deploying AI assistants at scale—enabling staff, faculty, and student employees to work more efficiently without exposing sensitive institutional data.



Scaling AI-Powered Knowledge Management While Protecting Data

By using Protopia SGT and Meta's Llama models for secure data processing, the university deployed an open-source AI pipeline on its on-premises supercomputing center, ensuring full control over institutional knowledge. Llama's Continued Pre-Training (CPT) allowed domain-specific fine-tuning without black-box risks, while Protopia SGT enabled privacy-preservation at AI inference—allowing the university to securely deploy AI assistants across multiple departments.



Faster Administrative Workflows

62% reduction in time spent writing job descriptions, improving hiring efficiency.



Improved Information Retrieval

87% reduction in time spent searching HR, finance, and facilities documents.



Automated Contract & Policy Reviews

80% reduction in time spent analyzing and redlining contracts.



Secure AI-Powered Knowledge Access

Rapid answers to institutional queries while protecting sensitive data.

Protopia AI makes Meta's Llama models enterprise-ready by solving the biggest barrier to adoption: data security.



Seamless Integration: Secure AI with Standard ML Tooling

- ### No Deviation From Existing AI/ML Deployment Pipelines:

- No change to the weights of trained AI model being targeted.
- Stained Glass Engine introduces minimal latency compared to target model training.
- Stained Glass Transform introduces next to no latency in inference pipeline.

- No Dependency On Non-Proven Technology (HW or SW):**

Built on widely used standard SW packages:

- Python 3.9, 3.10
- Pytorch >= 2.1.0
- Hugging Face Transformers
- Hugging Face Tokenizers

**Hugging Face Libraries are not required for non LLM use cases*

Data Protection Across Inference Inputs, Outputs, and Embeddings

Protopia SGT ensures that sensitive information never exists in plain-text outside of the enterprise zone of trust, securing data through every layer of the AI pipeline—from user inputs to model outputs. By protecting data used in AI, Protopia is ideal to help maximize the ROI on AI infrastructure.

