



LexAtlas

Multi-Agentive RAG
Assistant for U.S. Regulations

LexAtlas: Legal Intelligence for Real-World Impact

Transform legal complexity into actionable insights

by LexAtlas Team

<https://github.com/lexatlas-org>

The Problem



Simple Question, Complex Answer

"Where can I launch
without violating
regulations?"



Legal Complexity

Different state laws,
fragmented documents

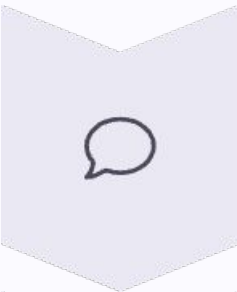


Current Options

Spend thousands on legal advice or risk non-compliance



Introducing LexAtlas



Ask a Question

"I want to install solar panels in Texas"



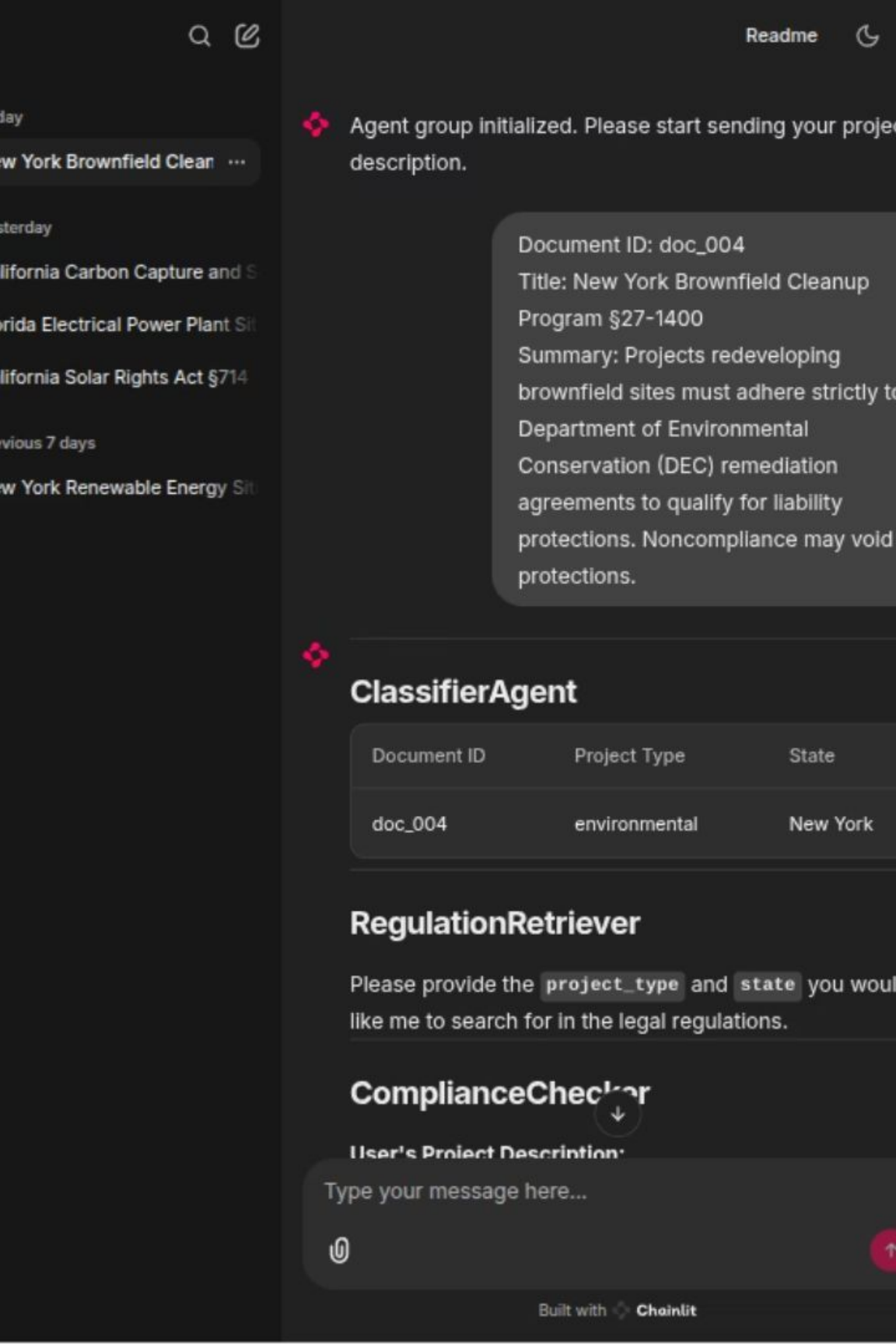
Instant Analysis

Identifies applicable laws



Actionable Results

Required permits, risks, incentives



How It Works



Classifier Agent

Detects project type and jurisdiction



Retriever Agent

Finds state laws via semantic search



Compliance Agent

Highlights potential risks



Report Agent

Summarizes in plain English



Live Demo: Carbon Capture in Wyoming

User Input

"Installing direct air capture plant in Wyoming"

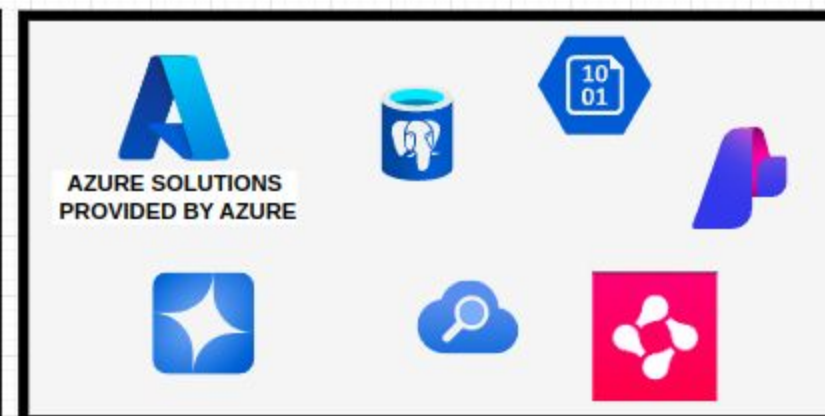
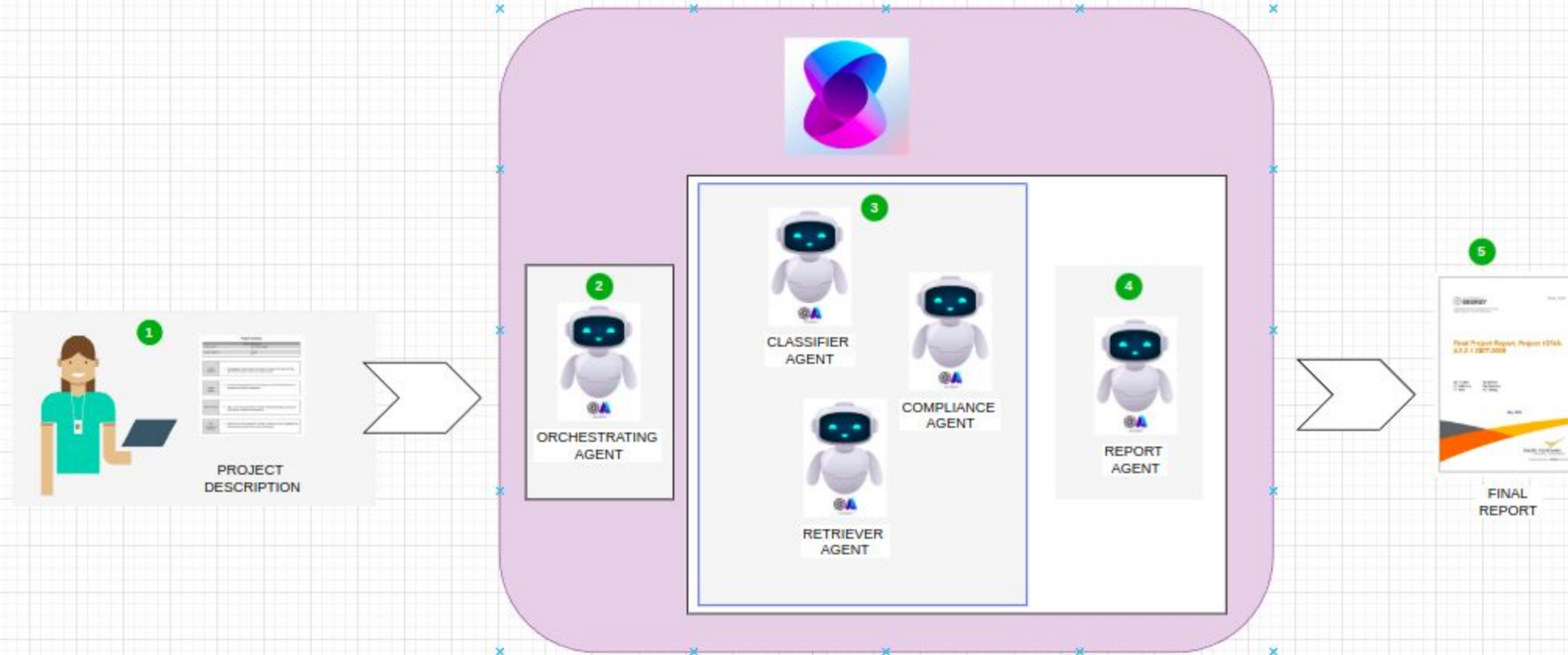
Instant Results

Wyoming Environmental Quality Act requirements

Added Value

Identifies incentives under Carbon Capture Program





What LexAtlas Is Not — and What It Is



Not a Lawyer Replacement

LexAtlas complements legal professionals but doesn't provide formal legal advice.



Situational Awareness

Delivers early insights to help teams understand regulatory landscapes before making decisions.



Reduces Blind Spots

Identifies potential compliance issues that might otherwise be missed.



Better Legal Preparation

Makes attorney consultations more productive and focused when you do need them.

Technical Architecture

Flexible Foundation

Azure AI Agent SDK, Semantic Kernel

Infrastructure as Code

Automated deployment scripts

Advanced Components

PostgreSQL memory layer, audit logging

Human Oversight

Expert review checkpoints

AI components and data flow



Azure Portal

mg-demo-ma-rg
Resource group

Search

Create

Manage view

Delete resource group

Refresh

Export to CSV

Open query

Assign tags

Move

Delete

Export template

Overview

Activity log

Access control (IAM)

Tags

Resource visualizer

Events

Settings

Diagnose and solve problems

Resource visualizer

Search management

Indexes

Indexers

Data sources

Aliases

Skillsets

Debug sessions

Settings

Semantic ranker

Knowledge Center

Keys

Scale

Search traffic analytics

Identity

Networking

lexatlas-ai-service-demo-20

lexatlas-ai-service-demo-v21

Search explorer

lexatlas-search-v21

Index

legal-index-v21

JSON query editor

Azure

Search resources, services, and docs (G+)

Copilot

Azure services

Create a resource

Resource groups

Azure AI Foundry

App Services

Cost Management

Azure Database for PostgreSQL

Azure Database for PostgreSQL

Azure Cosmos DB for

All resources

More services

Resources

Recent

Favorite

Name	Type	Last Viewed
mg-demo-ma-hub	Azure AI hub	2 hours ago
mg-demo-ma-rg	Resource group	2 hours ago
lexatlas-search-v21	Search service	a day ago
lexatlasstoragev21	Storage account	a day ago
mgdemomahub4892645402	Storage account	a day ago
sd-mgarcia-rg-form-recognizer	Resource group	4 days ago
sd-mgarcia-di-form-recongnizer	Document intelligence	a month ago
Azure subscription 1	Subscription	a month ago
Subscription 1	Subscription	a month ago
sdmgarciasaformrecog	Storage account	7 months ago
sd-mgarcia-ls-form-recongnizer	Language	8 months ago
sd-mgarcia-cs-form-recongnizer	Content safety	8 months ago

See all

Navigate

Access Control (IAM)

Data migration

Events

Storage browser

Storage Mover

Partner solutions

Resource visualizer

Data storage

Containers

File shares

Queues

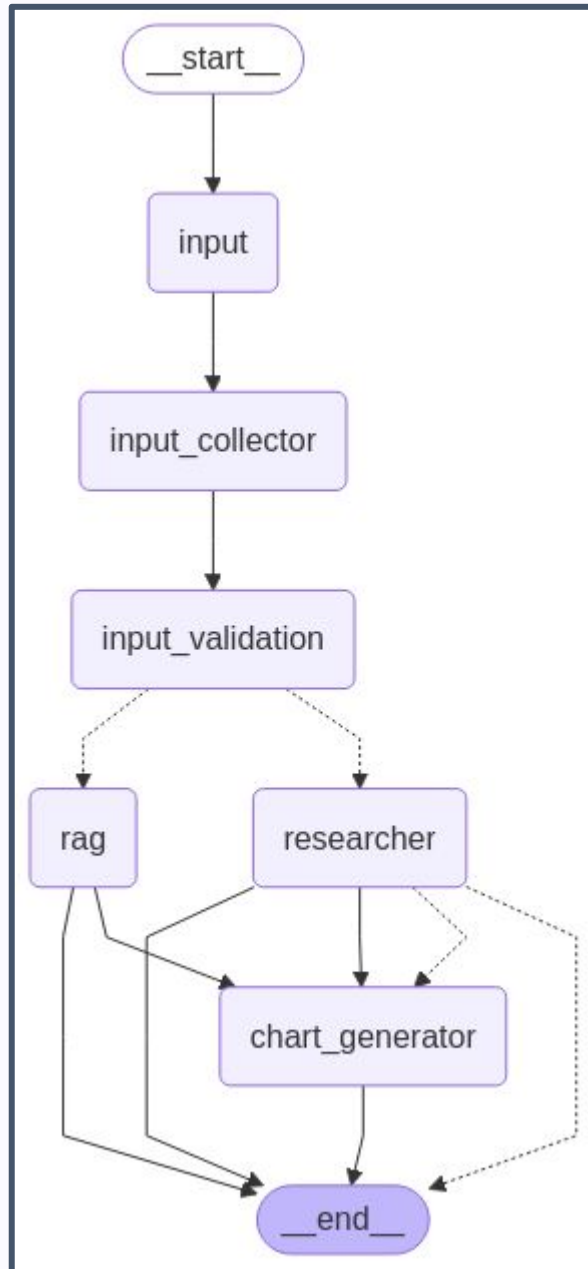
Tables

Security + networking

Data management

Settings

LangChain LangGraph



Multi Agent LexAtlas

A specialized agent for retrieving state-level legal regulations on auto insurance using AI.

Select State

☒ Florida ☐ California ☐ New York ☐ Other

Optional Additional Query

What requirements must an XML file meet to be accepted by the DHSMV system?

Voice Input (.wav)

Coloque el audio aquí
- 0 -
Haga clic para cargar

Transcript and Response

5. **File Transfer Protocol**:

- Files must be placed securely using SFTP. The SFTP site is the designated location for transferring files between insurance companies and DHSMV.

6. **Maximum Number of Records**:

- The XML file must comply with the maximum allowed number of records for daily reporting. This limit will be specified in the reporting guidelines.

7. **Notification of Schema Changes**:

- If the XML schema is modified, insurance companies will be notified by the DHSMV at least 90 days prior to the changes taking effect. It is important to maintain the updated schema for continued file submissions.

8. **File Compatibility**:

- The format of the XML file must be compatible with DHSMV's data processing capabilities, as required by Florida law, ensuring proper enforcement and regulatory use of submitted information.

Following these requirements will ensure successful submission and processing of XML files by the DHSMV system.

Voice Response

Enviar

Tools and Automation

```
EXPLORER
  LEXATLAS-FRONTEND
    > __pycache__
    > chainlit
    > files
    > .github
    > dataset
    > db
    > docs
    > infra
    > init
    > plugins
    > prompts
    > tools
    .env
    .env_example
    .gitignore
    01-kernel-ma-...
    02-kernel-ma-...
    03-kernel-ma-...
    04-kernel-ma-...
    05-kernel-ma-...
    06-kernel-ma-...
    07-kernel-ma-...
    08-wip.py
    agent_utils.py
    app_chat.py
    app_group_chat.py
    app.py
    chainlit.md
    config.py
    docker-compose.yml
    Dockerfile
    kernel_chat.py
    kernel_function.py
    kernel.py
    README.md
    requirements.txt
    test.py
    todo.txt
```

```
ohroot@acer-dev:~/Desktop/project/AZ-Hackathon/lexatlas/lexatlas-fronten
Creating agent: ClassifierAgent
Agent 'ClassifierAgent' created.
Thread ID: thread_1
Creating agent: RegulationRetriever
Agent 'RegulationRetriever' created.
Thread ID: thread_2
Creating agent: ComplianceChecker
Agent 'ComplianceChecker' created.
Thread ID: thread_3
Creating agent: ReportGenerator
Agent 'ReportGenerator' created.
Thread ID: thread_4
Uploading file: /h
```

```
07-kernel-ma-function.py
dataset/
kernel_chat.py
ohroot@acer-dev:~/Desktop/project/AZ-Hackathon/lexatlas/lexatlas-frontend$ python 05-kernel-ma-group-chat.py

[Setup] Loading agents...

[Thread] Creating conversation thread and sending user message...

[Chat] Setting up Agent Group Chat...

[Chat] Running the conversation among agents...

# Agent (ClassifierAgent) says: | Document ID | Project Type | State |
|-----|-----|-----|
| doc_001 | energy | New York |
# Agent (RegulationRetriever) says: Please provide the 'project_type' and 'state' for me to retrieve the relevant regulations.
# Agent (ComplianceChecker) says: | Risk or Issue | Related Regulation (citation) |
|-----|-----|-----|
| Missing permit from ORES for project over 25 MW | New York Renewable Energy Siting Law §94-c |

### Sources Consulted
- [New York Renewable Energy Siting Law §94-c](https://regulations.gov/new-york-renewable-energy-siting-law-94-c)
# Agent (ReportGenerator) says: Thank you for the additional information. Below is the required final legal advisory report based on the given data.

```plaintext
Final Legal Advisory Report

Project Overview
This project involves the development of a renewable energy facility within New York State. It falls under the classification of energy projects and exceeds the 25 MW capacity threshold. The project is subject to specific state regulations designed to ensure compliance with environmental and energy policies, such as obtaining the necessary permits prior to construction.

Relevant Regulations
1. **New York Renewable Energy Siting Law §94-c**: Projects building renewable energy facilities over 25 MW must secure a permit from the Office of Renewable Energy Siting (ORES) before the construction phase begins. This regulation is critical to ensuring state oversight over major renewable energy projects and maintaining environmental standards.
```

```
infra
 az_ai_search
 schema
 env
 env_example
 0-create_storage.sh
 1-create-ai-service.sh
 2-create_search.sh
 3-create_openai.sh
 4-upload_to_storage.sh
 5-...
 6-...
 7-...
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 95-...
 96-...
 97-...
 98-...
 99-...
 100-...
```

```
18
19 agents_config = [
20 {'name': 'ClassifierAgent', 'model': 'gpt-4o-mini', 'instructions': DIR_ROOT / "prompts/v2/1_classifier_prompt.md"},
21 {'name': 'RegulationRetriever', 'model': 'gpt-4o-mini', 'instructions': DIR_ROOT / "prompts/v2/2_regulation_retriever_prompt.md"},
22 {'name': 'ComplianceChecker', 'model': 'gpt-4o-mini', 'instructions': DIR_ROOT / "prompts/v2/3_compliance_checker_prompt.md"},
23 {'name': 'ReportGenerator', 'model': 'gpt-4o', 'instructions': DIR_ROOT / "prompts/v2/4_report_generator_prompt.md"},
24]

Search service name [default: lexatlas-search-v21]:
Data source name [default: legal-ds-v21]:
Skillset name [default: legal-skillset-v21]:
Index name [default: legal-index-v21]:
Indexer name [default: legal-indexer-v21]:
```



# Azure AI Foundry

Create and debug your agents

AgentsThreads

+ New agent

Edit connected

Search

Name

ReportGenerator

ComplianceChecker

RegulationRetriever

ClassifierAgent

Name

ReportGenerator

ComplianceChecker

RegulationRetriever

ClassifierAgent

Setup

Agent id

asst\_dfezl2AOHbg8EAzyVHgeNLIj

Agent name

Try in playground

Manage deployments of your models and services

Model deploymentsService endpoints

+ Deploy model

Refresh

Edit

Open in playground

Reset view

Name	Model name	Model version	State
	gpt-35-turbo	0125	Succeeded
	gpt-4o	2024-11-20	Succeeded
	gpt-4o-mini	2024-07-18	Succeeded

Agents playground

+ New agent

View code

Delete

Edit connected resources

Clear chat

Logs

Thread files

3664 tokens

- Minimizes regulatory risks and ensures smooth community engagement processes.

&nbsp;

\*\*Typical Example of a Renewable Energy Facility Project Objective:\*\*

> "Obtain ORES approval and complete the construction of a 50-megawatt solar energy facility in central New York by December 2026, ensuring full compliance with §94-c standards, within a development budget of \$80 million."

What LexAtlas Is — and What It Is Not

What LexAtlas Is Not — and What It Is

# Final Legal Advisory Report

## Project Overview

The project involves the development of a renewable energy facility within New York State, subject to the provisions of New York Renewable Energy Siting Law (§94-c). The facility is expected to have a generation capacity exceeding 25 megawatts (MW) and is designed to align with environmental, technical, and community standards. Its overarching goal is to contribute to New York State's transition to clean energy in compliance with the Climate Leadership and Community Protection Act (CLCPA).

## Relevant Regulations

1. \*\*New York Renewable Energy Siting Law, §94-c\*\*: This statute streamlines the permitting process for

Setup

Agent id

asst\_dfezl2AOHbg8EAzyVHgeNLIj

Agent name

ReportGenerator

Azure OpenAI Service resource connection

mgdemomahub7754744843\_aiai

Deployment

gpt-4o (version:2024-11-20)

Instructions

Generate a final legal advisory report based on the project classification, retrieved regulations, and compliance results.

Use the following structure to ensure clarity and completeness.

---

Knowledge (1)

legal-index-v21

https://lexatlas-search-v21.search.windows.net/

Actions (0)

+ Add

Display name

lexatlas-search

Index name already in use, choose a different name

Search type

Semantic

Connect

Cancel

# Memory - Logs

[illegible]



# The Github Repo

lexatlas-infraPrivate

main3 Branches1 Tag

mariogarcia-ar

Update readme.md

ai\_foundary

.gitignore

readme.md

README

LEXATLAS-INFRA

Tools for creating the infrastructure

ai\_foundary

The ai\_foundary folder contains the based on Azure AI Foundary compon

Project Structure

• deploy.sh

Bash script to automate the pro

• .env\_example

Example environment file conta

• main.bicep

github.com/lexatlas-org

lexatlas-org

Overview

Repositories6

Projects1

Packages

Teams1

People3

Insights

Settings

LexAtlas

LexAtlas is a multi-agent Retrieval-Augmented Generation (RAG) assistant that simplifies the analysis of U.S. state-level

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README.md

LexAtlas: AI-Powered Legal Assistant for U.S. Regulations

LexAtlas is an intelligent, multi-agent legal assistant designed to help users understand which U.S. state-level laws and regulations apply to their projects. It identifies legal risks, recommends next steps, and generates clear legal-technical summaries based on natural language input.

LexAtlas is a submission for the [Microsoft AI Agents Hackathon](#), showcasing how multi-agent AI systems can simplify legal compliance in complex, regulated environments.

What LexAtlas Does

Users can describe their project—such as an energy deployment, infrastructure plan, or environmental initiative—in natural language. LexAtlas will:

• Identify the project type and its U.S. jurisdiction.

• Retrieve relevant laws and regulations.

• Assess legal or compliance risks.

• Generate a human-readable legal summary.

The system is especially suited for early-stage planning when legal clarity is needed before contacting regulators or legal counsel.

Example

Packages

Teams1

People3

Insights

All

Search repositories

6 repositories

lexatlas-langchainPublic

MIT License • 0 • 0 • 0 • 0 • Updated 4 hours ago

.githubPublic

0 • 0 • 0 • 0 • Updated 4 hours ago

lexatlas-frontendPrivate

TypeScript • 0 • 0 • 0 • 0 • Updated 11 hours ago

lexatlas-apiPublic

Python • 0 • 0 • 0 • 0 • Updated 3 days ago

lexatlas-infraPrivate

Bicep • 0 • 0 • 0 • 0 • Updated 4 days ago

lexatlas-adminPublic

0 • 0 • 0 • 0 • Updated last week