



SYNKRON KNIGHTS

**HTPS - Agentic AI based real time cross jurisdictional
risk modeling solution**

Team Details:

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1. Solution Document

Project Summary

Synkron Knights is an AI-powered Legal Risk Intelligence system designed to analyze unstructured business or regulatory text and provide a clear, actionable risk assessment. The system evaluates jurisdictional exposure, applicable laws, compliance risks, and comparable real-world cases, enabling faster and more informed decision-making for compliance, legal, and business teams. The solution converts complex regulatory analysis into plain-English insights, reducing manual legal effort and ensuring consistency in risk evaluation.

Technology Used and Versions

Frontend

- HTML5
- CSS3
- JavaScript

Backend

- Python 3.10
- Flask 2.3

AI / NLP

- OpenAI GPT-4-O-mini

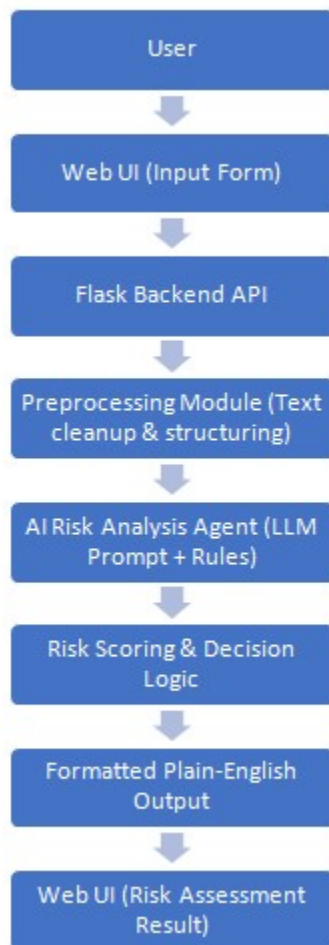
Deployment / Tools

- VS Code

AI Used and Version

- Model: OpenAI GPT-4 / GPT-4.1
 - Type: Large Language Model (LLM)
 - Usage: Legal text understanding, risk classification, reasoning, summarization
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Technical Architecture



Modules Used

1. User Interface Module
 2. Backend Controller (Flask Routes)
 3. Text Preprocessing Module
 4. AI Risk Analysis Module
 5. Risk Scoring & Decision Engine
 6. Response Formatter
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Flow Diagram (Step-by-Step)

1. User enters regulatory or business scenario text
 2. Frontend sends text to backend API
 3. Backend preprocesses input text
 4. AI engine analyzes risks using trained prompt logic
 5. Risk score and compliance decision are generated
 6. Final response is formatted into readable output
 7. Result is displayed on the dashboard
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Dataset Used for AI Training

This project uses a **pre-trained Large Language Model**.
No custom model training was performed.

However, **reference datasets** were used for prompt grounding:

- Public regulatory texts (GDPR, DPDP Act, IT Act, HIPAA summaries)
- Compliance guidelines (FATF, SEC, RBI, ISO excerpts)
- Publicly available legal case summaries
- Sample risk assessment documents

These datasets were used **indirectly** for prompt engineering and validation, not model retraining.

2. Coding Details

Module-wise Explanation

1. UI Module

- Captures user input text
- Displays loading indicator while processing
- Shows final risk analysis in plain English

2. Backend Controller

- Handles API requests
- Manages request validation
- Routes data between UI and AI engine

3. Text Preprocessing Module

- Removes unwanted characters
- Normalizes text
- Identifies key entities like country, sector, and activity

4. AI Risk Analysis Module

- Sends structured prompt to LLM
- Ensures consistent output format
- Extracts risks, laws, and decisions

5. Risk Scoring Engine

- Converts qualitative risks into numeric score (0–100)
- Categorizes risk as Low / Medium / High

6. Response Formatter

- Converts AI output into user-friendly plain English
 - Ensures no JSON, markdown, or symbols
 - Maintains professional tone
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Technique Used for AI Training

- Prompt Engineering
- Few-shot learning via structured examples
- Rule-based risk scoring layered on top of LLM reasoning
- Human-in-the-loop validation during testing

No fine-tuning or model retraining was performed.

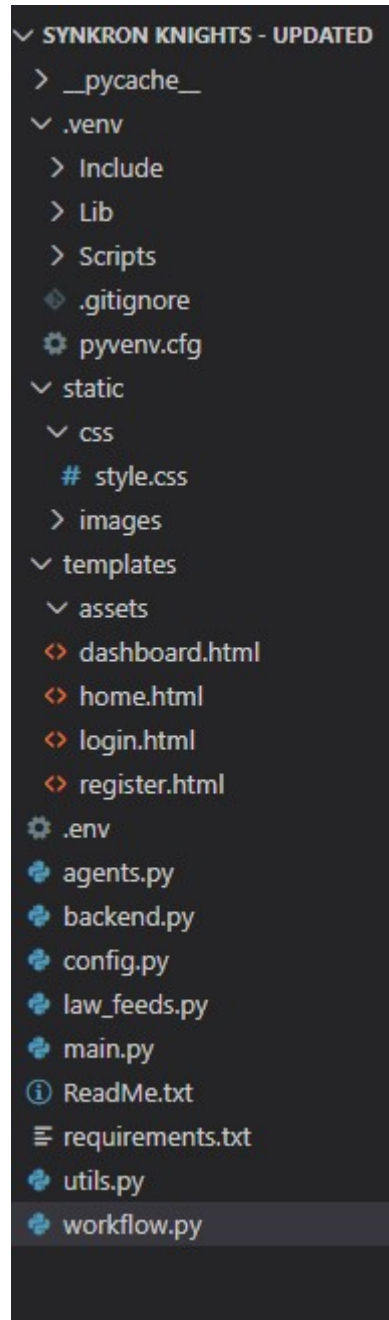
3. Final Outcome

Deliverables

- A working AI-based Legal Risk Intelligence web application
- Clean and readable risk analysis output

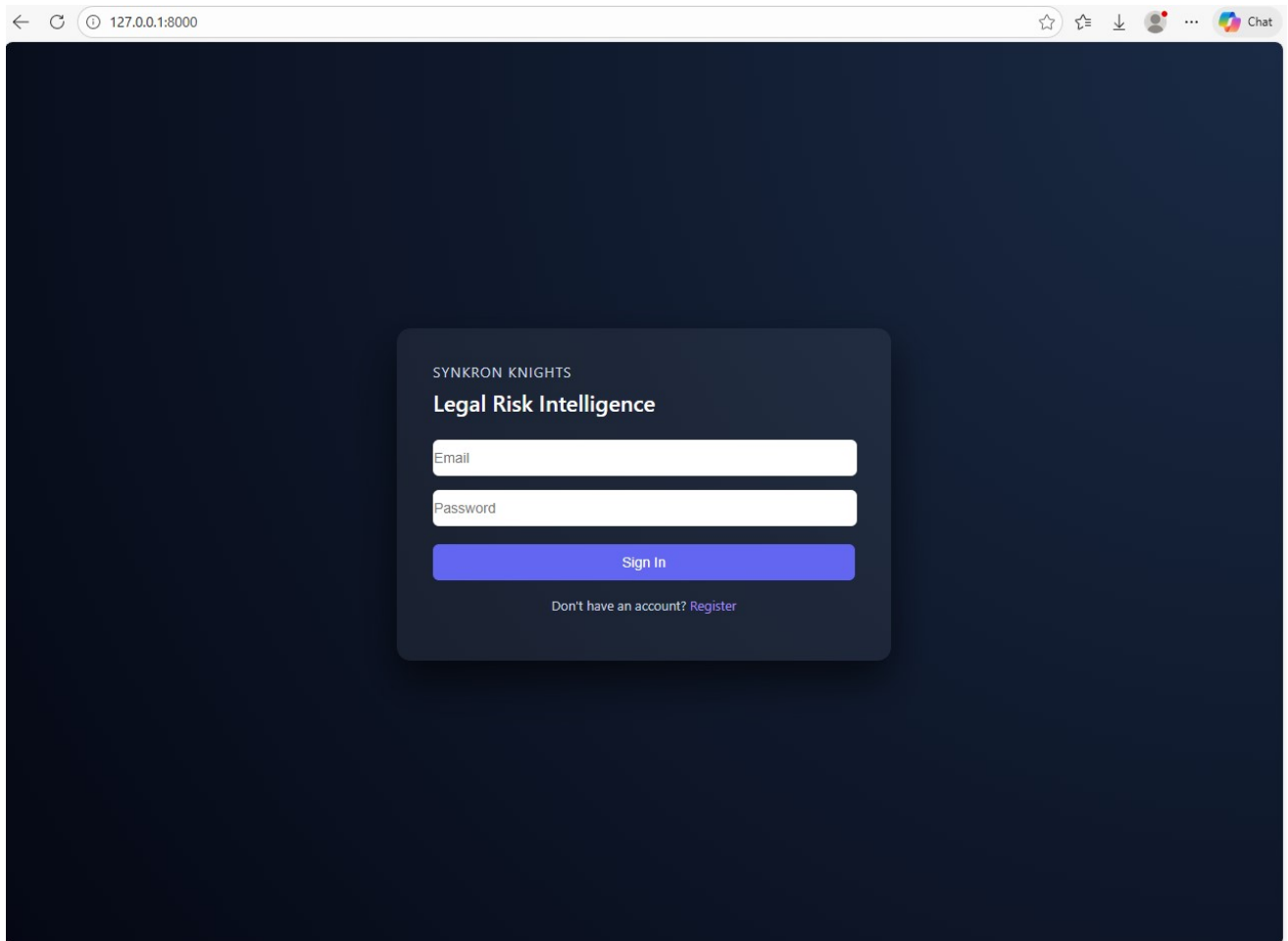
- Dashboard covering insights.
- Exportable Analysis(as .pdf)

Project Folder Structure



Functionalities

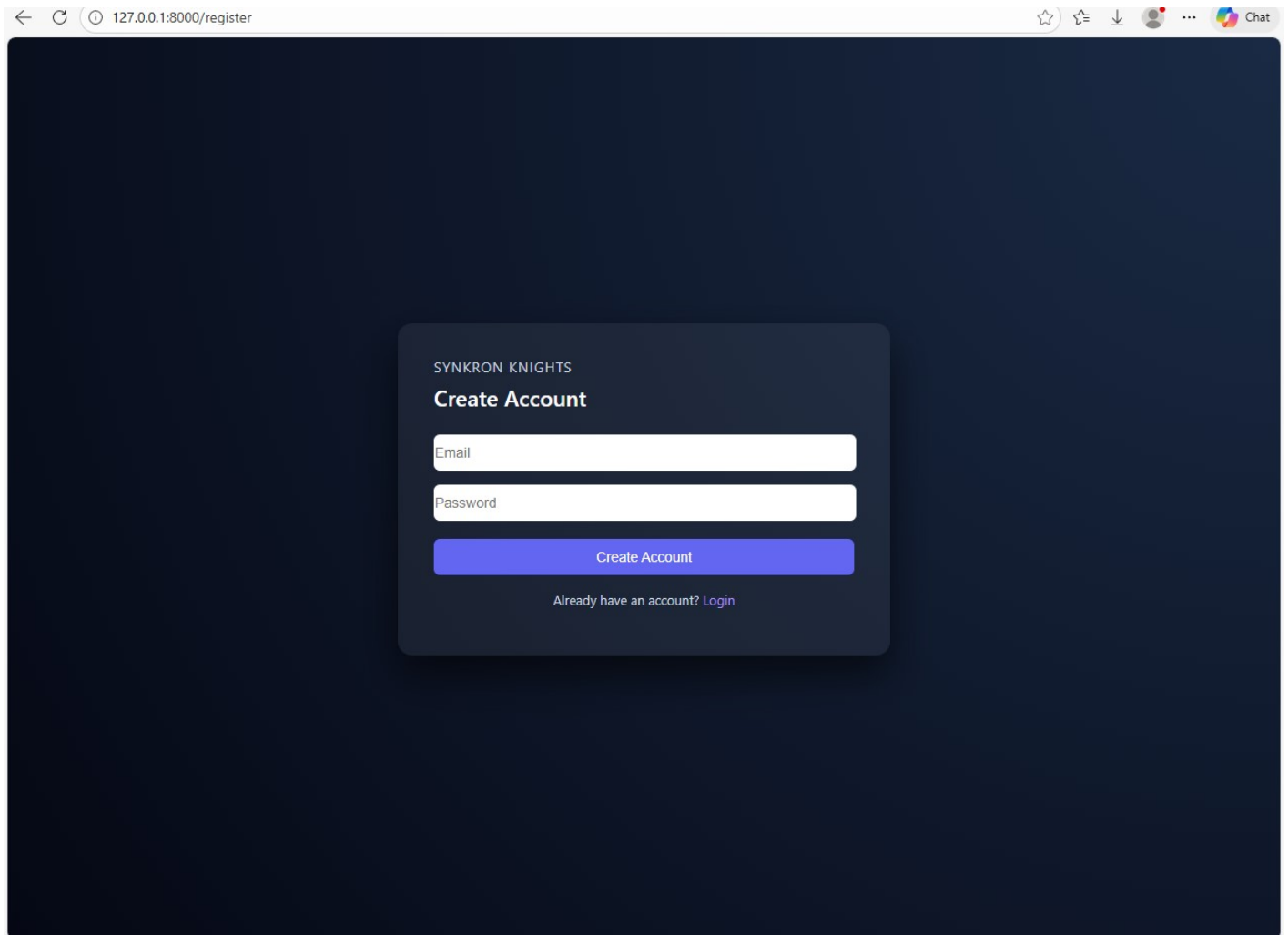
Login Page:



The screenshot displays a web browser window with the address bar showing "127.0.0.1:8000". The browser's toolbar includes back, forward, and refresh buttons, as well as icons for bookmarks, downloads, and a chat feature. The main content area has a dark blue background. In the center, there is a login form with the following elements:

- Header: "SYNKRON KNIGHTS" in a small, light blue font, followed by "Legal Risk Intelligence" in a larger, bold, white font.
- Input fields: Two white rectangular fields for "Email" and "Password".
- Button: A blue rectangular button with the text "Sign In" in white.
- Link: A small, light blue link that says "Don't have an account? Register".

Register Page:



The screenshot shows a web browser window with the address bar displaying "127.0.0.1:8000/register". The page features a dark blue background with a central white registration form. The form is titled "SYNKRON KNIGHTS" and "Create Account". It contains two input fields: "Email" and "Password". Below the input fields is a blue "Create Account" button. At the bottom of the form, there is a link that says "Already have an account? Login".

SYNKRON KNIGHTS

Create Account

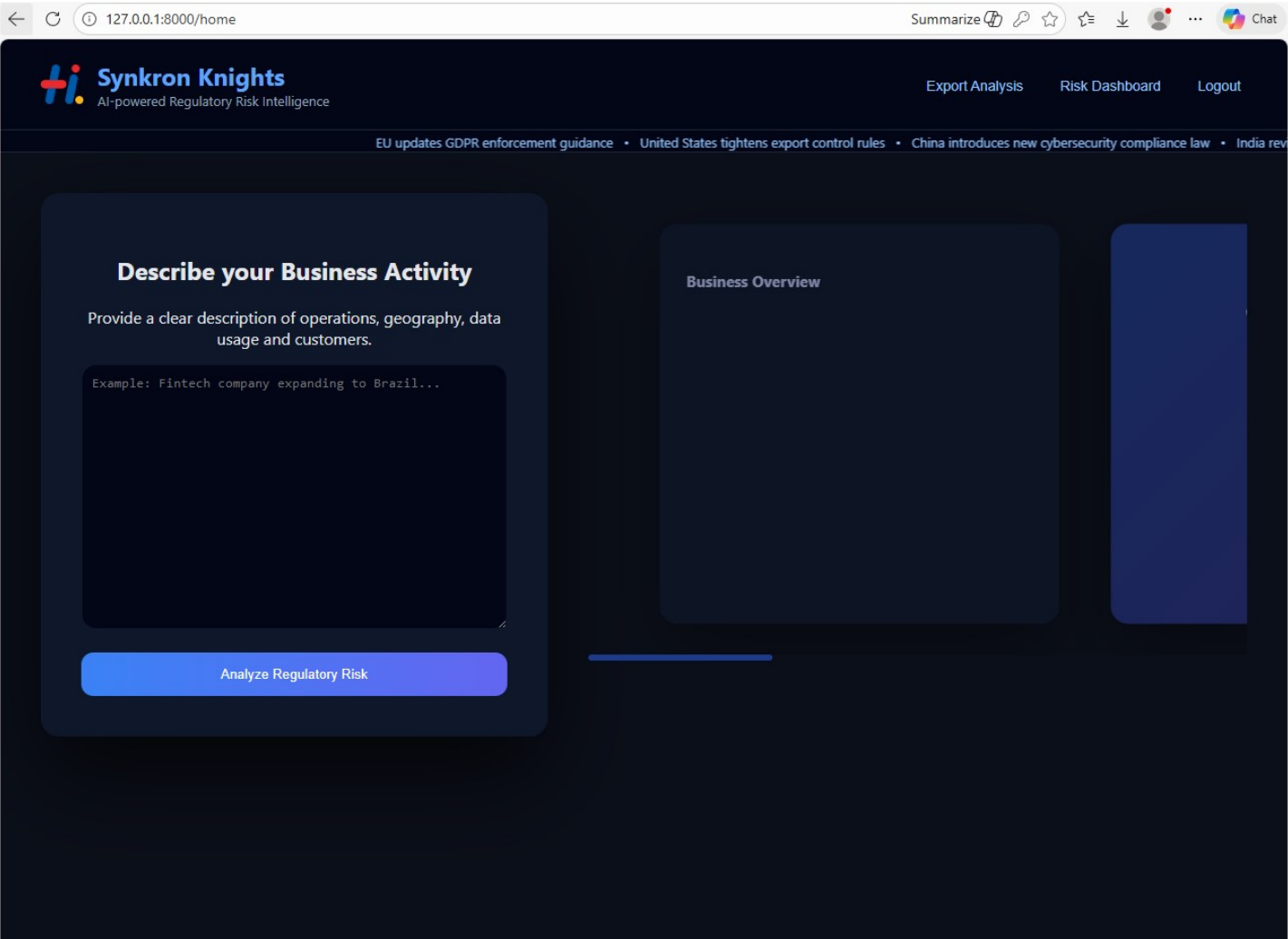
Email

Password

Create Account

Already have an account? [Login](#)

Home Page:



Risk Score:

Synkron Knights
AI-powered Regulatory Risk Intelligence

Export AnalysisRisk DashboardLogout

EU updates GDPR enforcement guidance • United States tightens export controls

Describe your Business Activity

Provide a clear description of operations, geography, data usage and customers.

I'm thinking of extending my business in Tokyo

Analyze Regulatory Risk

Status knowning

iceer base,
lf
prove
ically

Overall Risk Score

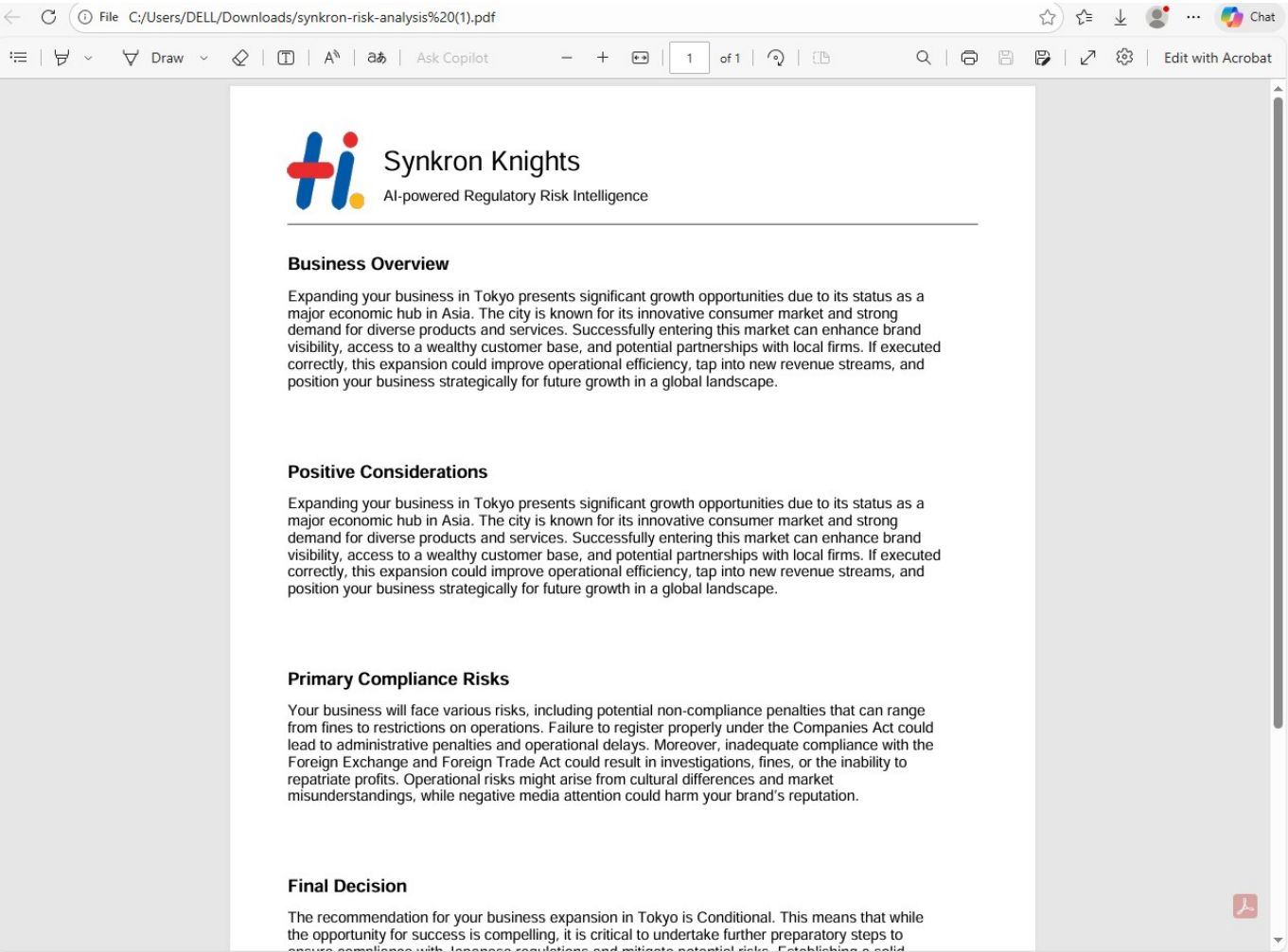
65

0-100 scale

Positive

Expand significant as a market for its increased demand Success brand value and potential execute operational streams for future

Exported Analysis pdf:



Risk Analytics Page:

