

Screenshots of Chatbot UI for all Scenarios

Outputs for text Input:

1. Research Papers listed for Text/Arxiv ID Search Input:

The screenshot shows a chatbot interface with a dark theme. On the left, a sidebar titled 'Interface Selection' has two options: 'PDF Chat' (unselected) and 'Text Analysis' (selected with a red dot). The main area contains a search input field with the text 'Deep Learning', a 'Submit Text' button, and a green confirmation bar that says 'Text submitted!'. Below this, the 'Search Results' section lists four papers:

- 1. Opening the black box of deep learning**
Published: 2018-05-22
- 2. Concept-Oriented Deep Learning**
Published: 2018-06-05
- 3. Deep learning research landscape & roadmap in a nutshell: past, present and future — Towards deep cortical learning**
Published: 2019-07-30
- 4. A First Look at Deep Learning Apps on Smartphones**
Published: 2021-01-13

2. Summary Output for Selected Research paper:

The screenshot shows the same chatbot interface, but now displaying a 'Structured Summary of "Opening the black box of deep learning"'. The sidebar remains the same. The main area shows the following content:

Structured Summary of "Opening the black box of deep learning"

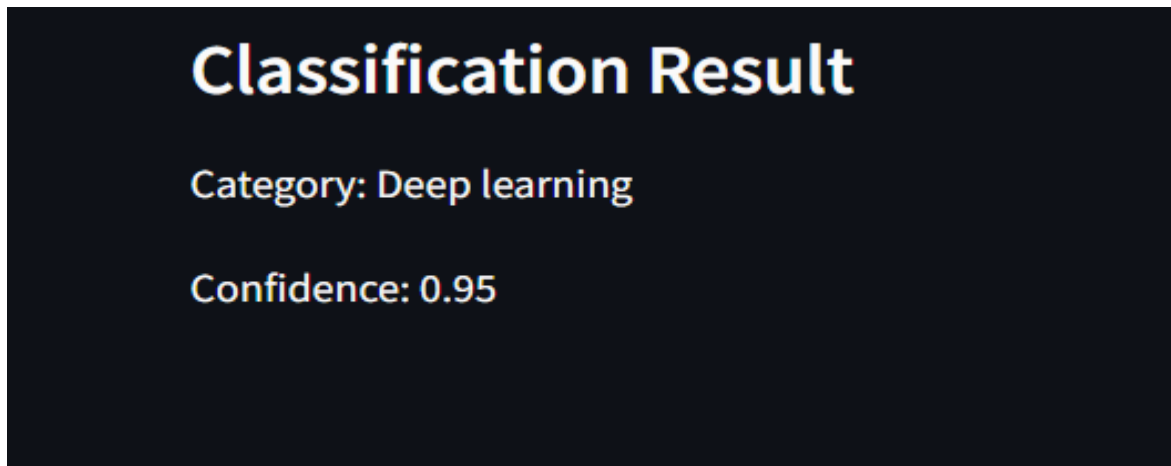
1. Core Contribution

This paper proposes a physics-based framework to explain the internal mechanisms of deep learning by treating neural networks as physical systems, leveraging principles from quantum mechanics and statistical physics to address unresolved theoretical questions in deep learning.

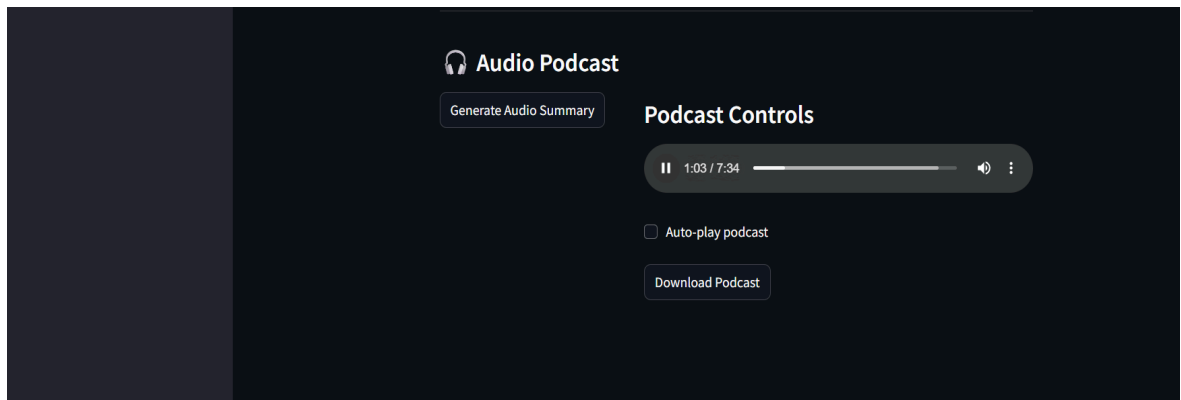
2. Theoretical Framework

- **Multi-Perspective Analysis:** Examines deep learning through three lenses:
 - *Microscopic:* Focuses on low-level operations (e.g., convolution, pooling, normalization).
 - *Macroscopic:* Addresses system-level properties (e.g., depth necessity, feature learning).
 - *Physical Worldview:* Connects neural network behavior to fundamental physics principles.
- **Physics Principles Applied:**
 - Quantum mechanics to model computations like convolution and Restricted Boltzmann Machines (RBMs).
 - Statistical physics to analyze cost function selection, layer-wise training dynamics, and system-wide behavior.

3. Classification result with confidence score based on user Categories:



4. Audio Podcast Generated by Gttx Library (Download Option):

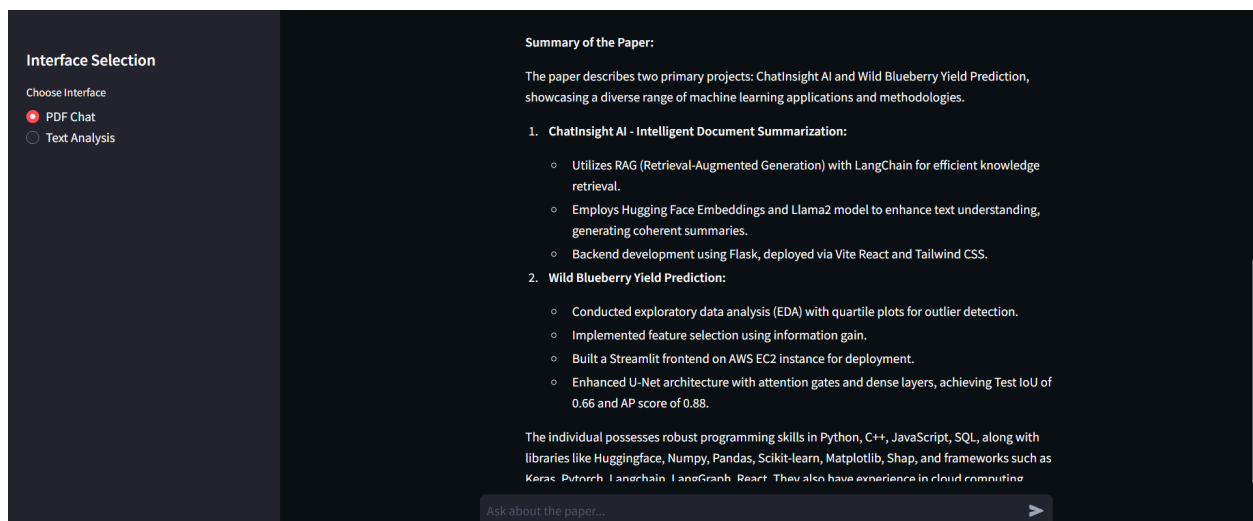


Outputs for File/PDF Input:

1. Paper Upload and Summary for RAG Pipeline



2. Summary of PDF:



3. Retrieved Source Documents:

Interface Selection

Choose Interface

PDF Chat

Text Analysis

technical proficiency and practical application across different domains.

Source Documents

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• Built an Agentic AI chatbot leveraging Anvix, Wikipedia, Tavily, and Groq LLM, developed using Model Context Protocol (MCP) and LangGraph for dynamic reasoning and modular orchestration. Projects • Chatinsight AI: Intelligent Document Summarization Nov. 2024 - Dec. 2024 (RAG, FAISS, LangChain, Hugging...

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Test IoU score of 0.66 and AP score of 0.88. - Preprocessed Geneva Rooftop Dataset, resizing images (520x520), normalizing pixel intensities and applying data augmentation. - Implemented contour detection on segmented output and calculated rooftop solar energy potential using irradiance data and panel e...

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SHRIRANG MAHANKALIWAR +91-9673399332 B.Tech. shrirang.mahankaliwar3@gmail.com Electronics and Telecommunication Engineering [github-shrirang](https://github.com/shrirang) Vishwakarma Institute of Technology, Pune linkedin-shrirang Education Degree/Certificate Institute/Board CGPA/Percentage Year B.Tech. Vishwakarma Institute of T...

4. RAG Classification

The document provided is best classified as:

1. Resume

This classification is based on the content's structure and purpose. The document details an individual's education, work experience, skills, certifications, and extracurricular activities, which are typical elements found in a resume. It does not contain research papers or invitations, making it unsuitable for the other categories.

Answer: 1. Resume

Source Documents