

## Natural Language Processing (NLP) Challenge

### Event Overview

The Language Wizards NLP Challenge is an advanced hackathon that empowers students to develop next-generation AI applications by leveraging Large Language Models (LLMs) and Agentic Workflows to address complex enterprise efficiency challenges.

Participants will develop and submit an "Agentic Enterprise Assistant"—a GenAI-powered bot capable of not just retrieving information, but actively solving internal workforce problems. This challenge demonstrates the transformative potential of Retrieval-Augmented Generation (RAG) and Function Calling in automating IT, HR, and Developer workflows for global organizations like HCLTech.

### Competition Format

The hackathon consists of two phases:

**Preliminary Round (Online):** Participants submit a concept proposal online, outlining their agent's design, RAG architecture, and action capabilities.

**Final Round (Offline Submission):** Participants will develop their solutions onsite at IIT Kharagpur during the hackathon, demonstrating live data retrieval and task execution. The completed models will be evaluated by judges, and the top solutions will be awarded prizes and recognition.

**Problem Statement:** Agentic Enterprise Assistant Development

## Objective

Your challenge is to create an Agentic Enterprise Assistant powered by NLP that can navigate vast internal knowledge bases (Policies, Code Documentation, IT Logs) to answer queries accurately and trigger mock actions (e.g., "File a ticket," "Schedule a meeting") to resolve employee issues autonomously.

### Scenario & Goal

In large enterprises like HCLTech, employees face "information overload." The goal is to build a central intelligence hub that enhances workforce productivity. By automating complex internal queries and performing actions without human intervention, this tool will illustrate the role of Agentic AI in the Digital Workplace.

**Note:** 'Execution' refers to generating valid Structured JSON outputs (Function Calling) for the requested task. Connecting to a live production server is not required.

### Target Domains (Select One or Mixed)

**IT Service Desk:** Automating troubleshooting, ticket creation, and software requests.

**Developer Support:** Retrieving legacy code documentation and suggesting fixes.

**HR Operations:** Answering complex policy questions and guiding leave applications.

### Team Composition & Eligibility

**Team Composition:** Maximum of 4 members per team.

**Eligibility:** Open to undergraduate and postgraduate students from any discipline.

**Selection:** Top teams from the Preliminary Round will proceed to the Final Round.

### Mandatory Dataset (<https://www.hcltech.com/corporate/hcltech-annual-report-2024-25>)

- **Source:** HCLTech Annual Integrated Report (Latest Version).
- **Action:** Participants must download this publicly available PDF from the HCLTech Investor Relations website.
- **Task:** The Agent must ingest this specific PDF to answer financial/strategic queries (e.g., "What is the revenue growth?") and citations must reference specific pages in this document.

## Round 1: Preliminary (Online)

**Teams must present a solution concept that includes:**

### Submission

**Technical Architecture:** Choice of LLM, Vector Database, and Embedding Models.

**Agent Workflow:** Flowcharts showing how the agent handles "Tool Use" or "Function Calling."

**Design Wireframes:** User Interface for the employee dashboard.

### Evaluation Criteria

**Feasibility and Creativity:** Viability of the proposed RAG pipeline.

**Innovation:** Use of advanced agentic frameworks (e.g., LangChain, AutoGen).

**Business Impact:** Relevance to HCLTech's enterprise environment.

Students will receive a selection mail regarding the submitted abstract within 1-2 days of the submission deadline.

## Round 2: Final (Offline Submission)

### Format

Teams will submit a functional Agentic Assistant model offline at IIT Kharagpur. This submission should include:

**Working Model Link:** A live demo or local host link.

**Source Code Repository:** GitHub link with clear readme.

**Detailed Documentation:** Covering the dataset used, RAG implementation, and results.

- **Live Demo:** Teams will present their solution live on their own laptops.
- **The "Chat with PDF" Test:** Judges will ask 3 random questions from the HCLTech Annual Report (e.g., "What are the key risks mentioned on page 45?"). The bot must answer correctly in real-time.
- **The "Action" Test:** Judges will give a command (e.g., "Schedule a meeting with HR"). The bot must display the correct JSON output for that action.

### Judging Criteria

**Accuracy (30%):** Low hallucination rates on technical/factual queries.

**Agent Capabilities (30%):** Success rate of triggering correct actions (e.g., correct JSON output for API calls).

**Impact and Practicality (25%):** Relevance to the "Digital Workplace" theme.

**Presentation (15%):** Quality of project presentation and clarity.

## General Rules

Teams must register on the official Kshitij website.

A Team ID will be allocated upon registration.

Solutions must be original, not covered by any patents, copyrights, or prior publications.

Late submissions will not be accepted.

Updates will be posted on the event website and emailed to registered participants  
email id : nlp@ktj.in

## PRIZE MONEY

Prize money will be awarded to the top 3 winning teams. Winners must submit the following details via email immediately after the results:

- Subject: Event Name, Team ID - Position
- Body: Account Holder Name, Account Number, Bank & Branch Name, IFSC Code.