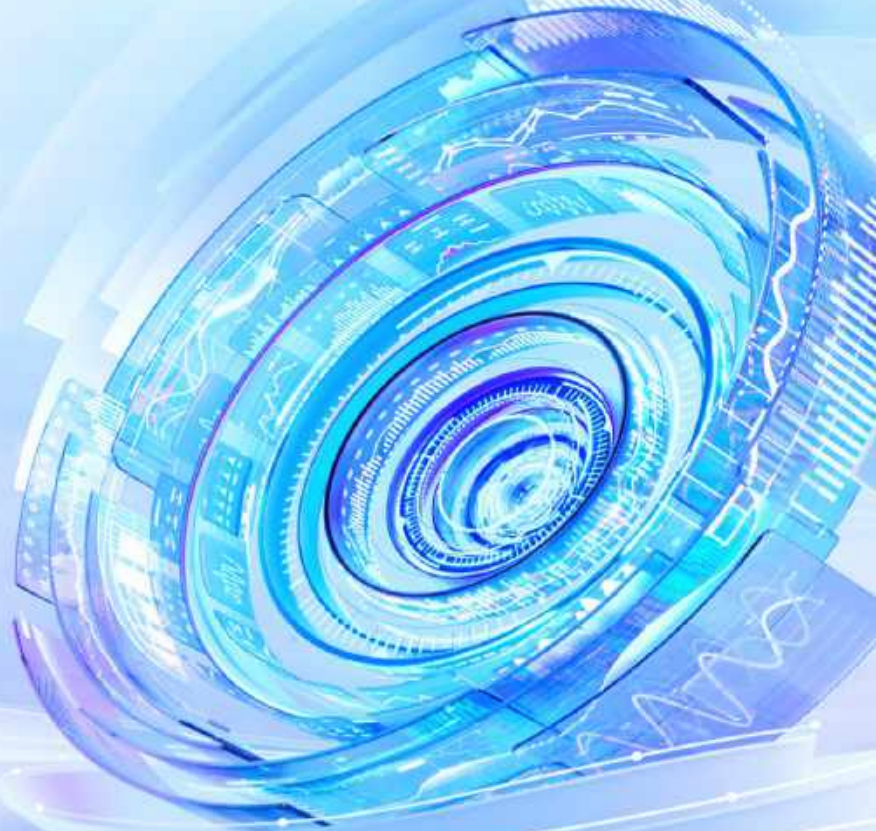


**AFAAC 2024**

**金融智能创新大赛**

Advanced FinTech AI Competition

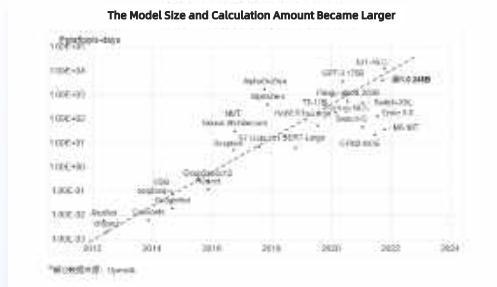




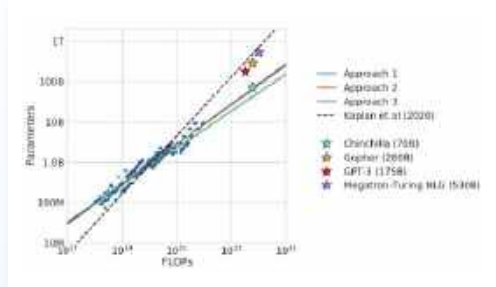
Looking back at 2023, AI has become an inevitable keyword throughout the year. From Microsoft, Open AI and NVIDIA to traditional internet giants, all of them are trying to lead AI development. Large-language-model technology became a new highland for sci-tech development, a new track for industries, and a new engine for economic development, with great development potential and wide application prospects.

AI

## Industry Development



In **cutting-edge technology**, large-language-models are driving continuous improvements in technological effects, continuing to develop towards larger scales and more parameters.



In **practical application**, the in-depth integration of vertical fields and large -language-models has innovated traditional research paradigms and production processes.



In terms of **ecosystem**, more countries and investors are investing in and planning an AI ecosystem as a long-term strategy. They are building infrastructure around AI technology, databases, cloud computing, intelligent chips and others.

## AFAC2024 Objectives

To accelerate the application and transformation of AI innovation in the FinTech sector, discover and nurture a batch of high-quality projects and start-ups, and strengthen the atmosphere of talent agglomeration, under the guidance of the Science and Technology Commission of Shanghai Municipality and the China Computer Federation, over 20 renown academic institutions and companies jointly initiated the “AFAC2024 - Advanced FinTech AI Competition” .

We would like to invite university students, industry developers, and entrepreneurs around the world to continuously explore the application and implementation of LLM technology in FinTech. We will apply the competition results to actual industries, and promote the innovative development of FinTech. The competition not only provides participants with **a platform to showcase talents**, but also offers **generous prize pool and comprehensive resource support, joining participants in a FinTech gala**.

# AFAC2023 Overview

The FIRST FULL-SET of FinTech algorithm challenge.  
Covered multiple domains such as banking, wealth management and insurance.

## Financial Data Verification

### Tracks

#### Track 1

- ✓ Financial Document Anti-Tampering (CV)

#### Track 2

- ✓ Financial Document Information Extraction (NLP)
- ✓ Financial Market Sentiment Generation and Compliance Detection (AIGC/NLG)
- ✓ Pet Age Determination - Insurance (CV)

## Financial Data Understanding

#### Track 3

- ✓ Time Series User Behavior Forecasting in Financial Marketing Scenarios (ML)
- ✓ Fund Trend Simulation and Forecasting (ML)

## Financial Scenario Understanding

## Highlights of the Challenge

Attracted 4,728 teams to participate and emerged with many innovative solutions. We cooperated with mainstream media throughout the whole process, and gained tens of millions of exposures in publicity.

### Finals Roadshow



### Award Ceremony

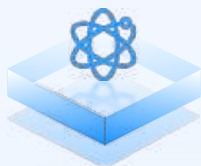


## Media Exposure



# AFAC2024 Intro

LLM Technology



Innovation and  
Entrepreneurship



2024 FOCUS

Prominent experts form academia and industry  
and exposure to FinTech conferences

Industry  
Conferences

Project  
Incubation

Funding support, professional  
Guidance, and exposure to VC & investors

Over a Million prize pool  
\*CNY

Million Prize Pool

AFAC2024  
金融智能创新大赛

Competition Tracks

Real FinTech industrial  
challenge in daily business

Competition Data

ALL based on massive real industry data

# Organizing Institutions

## Guided by

The Science and Technology Commission of Shanghai Municipality

## Academic Partner

China Computer Federation (CCF)



## Special Support

China Computer Federation Digital Finance Branch



## Organize Committee Members

Peking University, University of Hong Kong, Zhejiang University, Fudan University, Shanghai Jiao Tong University, Wuhan University, Tongji University, Sun Yat-sen University, Shanghai University of Finance and Economics, East China Normal University, Nanyang Technological University (Center for Sustainable Finance Innovation), Ping An Technology Co., Ltd., China Merchants Bank Co., Ltd., Haitong Securities Co., Ltd., Taikang Online Property Insurance Co., Ltd., China Electronics Jinxin Software Co., Ltd., The Paper Technology Channel, Shanghai Technology Entrepreneurship Foundation for Graduates (EFG), Ant Group Co., Ltd., TianChi, ModelScope



# Expert Jury



Jiang Changjun

## Honorary Chairman

Member of the Chinese Academy of Engineering & Professor at Tongji University

## Chairman of the Organize Committee



Peng Xin

Vice Dean of the School of Computer Science, Fudan University



Wang Xiaohang

Vice President of Ant Group, CTO of Ant Wealth & Insurance



Xiao Jing

Chief Scientist of Ping An Group, Ph.D. in Computer Science from Carnegie Mellon University, National Distinguished Expert, Guangdong provincial CPPCC member

## Representatives from the Expert Jury (total 40+)



Huang Chao

Assistant Professor, HKU  
Department of Computer Science



Chang Xin

Professor and Associate Dean, Nanyang Business School  
Director, Centre for Sustainable Finance and Innovation  
Nanyang Technological University



Chen Tao

Associate Professor, Nanyang Business School  
Nanyang Technological University



Xiao Yanghua

Professor, School of Computer Science, Fudan University &  
Director of the Shanghai Key Laboratory of Data Science



Gao Xulei

Head of Digital Finance Development Office,  
China Merchants Bank



Lan Man

Professor, School of Computer Science and  
Technology, East China Normal University



Wang Lei

Head of Frontier Technology of Ping An  
Technology, Senior Statistician, Ph.D. in  
Economics, Postdoctoral in Finance



Wang Yongtao

Associate Researcher, Wangxuan Institute  
of Computer Technology, Peking University

# Three Groups



## Challenge Group

**Participants** Developers

**Type** Algorithm

**Content** Solve business scenario problems based on real data in the FinTech industry.

## Start-up Group

**Participants** Entrepreneurial teams or seed enterprises

**Type** Creative development and application

**Content** Effectively collaborate with LLM technology in various vertical industry to develop application demonstration and prepare business solutions based on agentUniverse multi-agent framework. Various scenarios such as ESG, finance, technology and digital life are encouraged.

## Enterprise Group

**Participants** SMEs in the Fintech industry

**Type** Business Practice

**Content** Discover bright and innovative new technology and new product in business practice. The emerging directions of Fintech industry are welcomed.



# Prizes and Benefits - Challenge Group



First Prize

1 Winner  
¥50,000



Second Prize

2 Winners  
¥30,000



Third Prize

3 Winners  
¥10,000



Special Award

3 Winners  
¥5,000  
( Mentor Award)



**Offer Green Channel:** Outstanding participants have the opportunity for job offer green channel to join the Ant FinTech team.

**Expert Guidance:** We invite academia and FinTech experts to offer challenge guides, trainings, and Q&A sessions, to assist contestants to quickly get started and win the leadboard.

\*Prize is presented for each track and all in CNY.

# Prizes and Benefits – Start-up Group



First Prize

1 Winner  
¥100,000



Second Prize

2 Winners  
¥50,000



Third Prize

3 Winners  
¥30,000



Special Award

5 Winners  
¥10,000  
(Excellence Award)

## Benefits

- Investment and Financing Matchmaking:** Outstanding projects will be recommended to government investment funds, venture capital institutions, investors, etc., and activities such as FinTech conferences and project roadshow or display. Entrepreneur trainings and guidance services are provided for winner teams/companies.
- Funding Green Channel:** Shanghai Technology Entrepreneurship Foundation for Graduates (EFG) will provide the green channel to “Angel Fund” for winner teams/companies.
- Expert Guidance:** We invited renowned experts from the investment and financing sector to serve as mentors, providing entrepreneurship guidance, venture capital, and industry resources to help contestants' projects to get started in the competition and future development.
- Product Priority:** We provide one-year priority usage rights to the designated version of agentUniverse, and priority access to internal beta versions of Ant Group's financial evaluation dataset.
- Media Exposure:** The competition will exhibit and promote the winner projects on social medias.
- Project Showcase:** Outstanding projects will be provided with diverse exposure opportunities such as FinTech industry conference roadshows, investment and financing matchmaking, and project exhibitions.

# Schedule



# AFA C2024

Introduction to Challenge Group  
Four Tracks



## Track 1

Financial Instrument  
Learning



## Track 2

Question Answering  
Based on Insurance  
Terms



## Track 3

AIGC Multimodal  
Financial Research  
Report Intelligent  
Generation



## Track 4

Contradiction Identification  
And Vulnerability  
Discovery in Long  
Texts of Financial Rules



# Track 1: Financial Instrument Learning



## Background

In the financial dialogue domain, question-answering systems increasingly rely on highly intelligent intent recognition and information retrieval technologies to accurately understand user needs. During iterative upgrades, diversified API resources have been accumulated. Most APIs can serve as independent atomic services. User questions can be decomposed into a chain of thought (CoT), with each thought requiring one or more atomic APIs to complete the answer.

## Challenge

Fully utilize diversified API resources to transform users' natural language questions into executable API lists, and design an end-to-end solution.

## Solve Problems

To establish a learning model for multiple API tools in financial scenarios, query results by calling relevant APIs, and ultimately generate and return accurate results, it is necessary to develop tool-learning solutions with more efficient output and enhanced cross-scenario generalization to drive technological evolution in this direction.

# Track 1: Financial Instrument Learning

## 1. Task Objective

In this task, participants need to select appropriate API lists from the API collection based on the user query and generate answers to directly respond to the user's questions. Participants can make full use of the provided dataset and employ large models to design optimal prompts to obtain the best generation results.

## 2. Task Data

**Dataset Composition:** The dataset includes funds and stocks. According to API output types, they can be categorized into categorical and numerical datasets. According to API combinations, they can be divided into two main classes: single API calls and combined API calls. The APIs in the dataset can be categorized into **9 major types** based on capabilities: multi-condition, range, aggregation, comparison, computation, time-related, sorting, nested, and reasoning.

**Data example:** Tell the price difference of the stock of "Moutai" and the stock of "Wuliangye"

## 3. Evaluation Rules

Evaluation will be static automatic evaluation on the test dataset,  $\text{Score} = \text{Main Metric} * 50\% + \text{Secondary Metric 1} * 20\% + \text{Secondary Metric 2} * 30\%$

**Main Metric:** Accuracy of the results obtained by executing the api\_list;

**Secondary Metric 1:** Logical accuracy of APIs and input/output parameters in the api\_list, excluding the impact of order;

**Secondary Metric 2:** Rouge-L score of the generated text;

## Track 2: Question Answering Based on Insurance Terms



### Background

The complexity of current insurance products and their terms is constantly increasing, making it more difficult for users and practitioners to understand and apply the terms, posing challenges to the industry's service efficiency and quality. Intelligent optimization of the insurance term question-answering process is imperative. Large language models, with their advantages in deeply understanding and comprehensively extracting long texts, provide an effective approach to overcome this challenge.

### Challenge

The accuracy of understanding long clauses poses a challenge to the long-text comprehension capabilities of large models. This requires the models to excel in accurately interpreting clause details, developing the logical framework for clause meanings, and efficiently screening, integrating, and thoroughly grasping key information within the text.

### Solve Problems

By leveraging large models' long text processing capabilities, we aim to develop an intelligent question-answering system that can accurately respond to inquiries related to insurance products, introducing innovative business models to the insurance sector.



# Track 2: Question Answering Based on Insurance Terms

## 1. Task Objective

Participants need to design and train an intelligent question-answering model that can accurately understand the content of various insurance product terms and provide precise and clear answers to users' questions regarding the insurance terms. We will provide a series of insurance term documents and corresponding user question-answer pairs as training data. The model's performance will be evaluated based on its accuracy, response time, and user satisfaction.

## 2. Task Data

### Example:

"question": "1000万旅游意外险的默认保险期间是多久?",

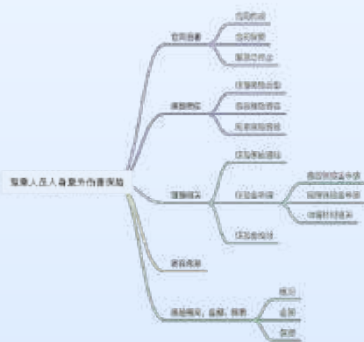
"keyword": "1000万旅游意外险、默认保险期间",

"prom\_answer": "1年",

"answer": ["1000万旅游意外险的默认保险期间是一年。",

"1000万旅游意外险默认保险期间一年。",

"1000万旅游意外险具有一年的默认保险期间。"]



## 3. Evaluation Rules

- ▶ **Preliminary Stage:** To ensure the precision of answers, we have designed the following formula. First, it is necessary to ensure the accuracy of basic information keywords. Subsequently, it is important to focus on ensuring the precision of language expressions.

$$\begin{cases} 0.25 + 0.25 + \max_{\text{similar}}(\text{sentence1}, \text{sentence2}, \text{sentence3}) * 0.5, & \text{correct answer} + \text{correct keywords} \\ 0.25 + 0 + \max_{\text{similar}}(\text{sentence1}, \text{sentence2}, \text{sentence3}) * 0.5, & \text{correct answer} + \text{wrong keywords} \\ 0 + 0 + \max_{\text{similar}}(\text{sentence1}, \text{sentence2}, \text{sentence3}) * 0.5, & \text{no answers or keywords} \\ 0, & \text{wrong answer} \end{cases}$$

- ▶ **Semifinal Stage:**

A self-developed prompt evaluation model will score the answers from multiple dimensions. The total score will be aggregated and displayed to determine the final Challenge ranking.



## Background

Currently, large models struggle to directly meet the complex financial business scenario requirements in intelligent investment research and advisory. One trend in financial technology industry development is that more and more practitioners are establishing intelligent agents for financial research report generation, overcoming the challenges of data timeliness, long text summarization, long text generation, and chart generation faced by large models. This enables the intelligent generation of research reports with authenticity and usability, serving institutions such as funds, asset management agencies, and investment banks, as well as a massive number of potential customers.

## Challenge

In financial scenarios, with the large model technology, models are required to effectively sort out multi-modal data such as text, charts, and market data while understanding financial terminology, logical structures, and economic principles. It is necessary to innovate the generation of professional research reports while ensuring personalized features, efficiency, security, and compliance to promote the practical application and upgrading of financial technology.

## Solve Problems

By deeply integrating large model technology and financial data, we aim to propose innovative solutions for financial research report generation intelligent agents and apply them to real-world scenarios.

# Track 3: AIGC Multimodal Financial Research Report Intelligent Generation

## 1. Task Objective

In this task, participants need to generate a financial report. The content elements include chart information and text analysis, based on financial data sources (e.g., stock data, news, annual reports, individual stock reports, etc.).

This research report generation task consists of the following two sub-tasks

### ► Sub-task 1: Individual Stock Research Report Generation

Task Outputs:

- 1) Chart or table
- 2) Rating type + fact + trend and analysis (reasons or impacts)

	Rating Label	Rating System Description
Stock Investment Rating	Buy	Relative return of the stock price is expected to exceed 10%
	Hold	Relative return of the stock price is expected to be -10% to 10%
	Sell	Relative return of the stock price is expected to be lower than -10%

### ► Sub-task 2: Industry Research Report Generation

Task Outputs:

- 1) Chart or table
- 2) Top 10 stocks + Rating type + fact + trend and analysis (reasons or impacts)

	Rating Label	Rating System Description
Industry Investment Rating	Outperform	Relative return of the stock price is expected to exceed 5%
	Neutral	Relative return of the stock price is expected to be -5% to 5%
	Underperform	Relative return of the stock price is expected to be lower than -5%

## 2. Task Data

Reference data sources such as financial news, stock data, company annual reports, raw material prices, securities information sources, etc. will be provided in the challenge topic.

## 3. Evaluation Rules

Evaluation metrics are divided into objective metrics and human evaluation metrics, each weighted at 50%. During the A-leaderboard submission stage, only the objective metrics will be displayed. [The B-leaderboard will include human evaluation metrics.](#)

Objective metrics include: element type restriction (10%), objective evaluation metrics (20%), and objective economic benefit metrics (20%)  
Human evaluation metrics will evaluate multiple aspects including the performance of charts and the rationality of text descriptions

## Track 4: Contradiction Identification and Vulnerability Discovery in Long Texts of Financial Rules



### Background

In the financial sector, long text documents such as regulations, compliance guidelines, and contracts play a crucial role. However, these documents may contain common sense errors, contradictions, ambiguities, or even vulnerabilities. Failure to detect and correct these issues in a timely manner could have serious consequences for financial institutions' decision-making, compliance operations, and protection of customers' legitimate rights and interests.

### Challenge

In this task, erroneous sentences or words will be embedded in dozens of long text documents, and participants need to design algorithms to identify the contradictory positions with high accuracy.

### Solve Problems

Designing a universal detection model to automatically identify these problems not only safeguards the robust operation of financial institutions and consumer rights protection but also contributes to maintaining fair competition and overall stability in the financial market, having a profound impact on promoting the healthy development of the financial industry.

# Track 4: Contradiction Identification and Vulnerability Discovery in Long Texts of Financial Rules

## 1. Task Objective

Participants are required to design algorithms to identify erroneous sentences in the documents, using punctuation or line breaks as splitting points. Error types include common sense errors, contradictions, incorrect numerical units, and incomplete data.

## 2. Task Data

The data provided in the Challenge is mainly sourced from non-confidential regulations, compliance guidelines, contracts, etc., with vulnerabilities embedded by experts. On average, each document has 3-10 known vulnerabilities.

## 3. Evaluation Rules

The evaluation metrics is based on the identification the classification of the vulnerabilities. Hence, **Micro-F1 Score** is used evaluate the model's effectiveness, with a higher score indicating a higher ranking.

$$P_{micro} = \frac{\sum_{i=1}^n TP_i}{\sum_{i=1}^n TP_i + \sum_{i=1}^n FP_i} \quad R_{micro} = \frac{\sum_{i=1}^n TP_i}{\sum_{i=1}^n TP_i + \sum_{i=1}^n FN_i}$$

Using the above formula, the precision rate (P) and recall rate (R) are calculated, and the micro-averaged Micro-F1 score is used as the evaluation metric

$$F1_{micro} = \frac{2 * P_{micro} * R_{micro}}{P_{micro} + R_{micro}}$$

# Challenge Group Submission Rules

## 1. Code Submission

During the Challenge, contestants will download data from the [TianChi Platform](#), code and train the models locally, and submit results online. The leadboard will refresh every day. Please note some tracks adopt a test leadboard (A-board) and final leadboard (B-board) format. During the A-board, the leaderboard will display the all contestants' ranking. During the B-board, we will select top 10-20% from A-board to continue online competition and the highest 10 will enter the final on-site review.

## 2. Report Submission

- ▶ Participants are required to submit the complete report that include models and codes, data preprocessing steps, feature engineering, model training, and prediction. The code should be annotated in detail to facilitate evaluation by the review panel. The code should be able to fully reproduce the participants' prediction results.
- ▶ Participants may use public pre-trained models or public datasets, but cannot use closed-source models or private data. Direct use of APIs of public models such as GPT-4, ChatGPT, ERNIE Bot, and ChatGLM for testing on the test dataset is not allowed.
- ▶ After B-board, the expert jury will evaluate the code submitted by the finalists. The code must meet the following requirements:
  - ① The code logic is clear and easy to understand.
  - ② The code is well annotated for readability by expert jury.
  - ③ The code runs without errors and can reproduce the prediction results.
- ▶ Participants should save the corresponding data files, fix and save random seeds and hyperparameters to ensure that the reproduced results are completely consistent with the submitted data.

# Challenge Group Format

Stage	Description	Schedule
Sign up	<ul style="list-style-type: none"><li>Tracks are opened to participants worldwide, from colleges, universities, research institutes and enterprises, etc. can register through the Tianchi Platform. Contestants can <a href="#">only choose one group</a> from Challenge Group, Start-up Group, or Enterprise Group. <a href="#">Within Challenge Group, Contestants can attend multiple tracks.</a></li><li>Contestants can compete individually or in teams of <a href="#">up to 3 members</a>. Each participant can only join one team.</li><li>To ensure the validity of the team members' information, all contestants must complete <a href="#">real-name authentication</a>. Failure to complete this will disqualify participants from advancing to the semi-final (B-board) and final.</li></ul>	Jun 3 - Jul 19
Code Submission Online Evaluation	<ul style="list-style-type: none"><li>After successful sign-up, contestants can download training data from the TianChi Platform, code and train the model locally, and submit results online.</li><li>The system conducts basically real-time evaluation and updates the ranking list hourly or daily. Teams have few submission opportunities per day and are ranked based on evaluation metrics. Participants are ranked and displayed on the ranking list with their best historical performance within this stage.</li><li>Contestants that fail to submit results according to the track requirements and formats will not be able to advance to the semi-final (B-board) and final.</li></ul>	Jun 3 - Jul 26
Report Submission	<ul style="list-style-type: none"><li>Top-ranking teams will be notified by the organizing committee to enter the review process. Contestants must submit <a href="#">team information, competition codes and models, and technical reports as required</a>. Those who fail to submit on time will be regarded as abstaining. Those who are found to have violated competition rules during the review process will be disqualified from the review and award. Teams disqualified from the review will be replaced by subsequent teams based on the ranking list.</li><li>Details on report submission will be notified by the end of July.</li></ul>	Aug 5
On-site Review	<ul style="list-style-type: none"><li>The final will be conducted via on-site roadshows in Shanghai tentatively. The roadshow order will be determined by drawing lots by team representative.</li><li>The roadshow will involve a PowerPoint presentation and Q&amp;A session followed with experts. Expert jury will give final score comprehensively based on participants' technical ideas, theoretical depth, and live performance. The final ranking will be determined based on the scores at on-site review.</li><li>The presentation will be recorded and probably showed on competition official media channel.</li></ul>	Mid August

# AFA 2024

## Introduction to Start-up Group





# Start-up Group Introduction

Along with the widespread application of large-language-models across various industries, LLM based Artificial Intelligence Agents (AI Agents) are booming. Research on AI Agents is one of the explorations made by humans to approach Artificial General Intelligence (AGI). As AI Agents become more user-friendly and efficient, there is a growing number of “Agent+” products. In near future, AI Agents are expected to become the fundamental architecture of AI applications, penetrating different fields such as B2C and B2B products. The Start-up group is based on Agent technology.

The Start-up Group is intended to discover, cultivate, and empower start-up teams or enterprises with disruptive innovative ideas and cutting-edge technological capabilities to drive continuous innovation and healthy development in society and industry. Participants are encouraged to develop applications focus on core areas such as FinTech, ESG, and digital life ecosystems. We would like to see [innovative combination with multi-agent frameworks and LLM technologies](#).

## Recommended Directions

### Direction 1

Intelligent  
Interpretation and  
Analysis of ESG  
Reports

### Direction 2

Historical/Real-time  
Identification and  
Interpretation of  
Financial Events

### Direction 3

Intelligent Exploration  
of Investment  
Strategies

### Direction 4

Intelligent  
Travel Planning  
Assistant

### Direction 5

Intelligent  
Customer Service  
System

Participants are also encouraged to propose other application areas based on their research direction, social hotspots, and other relevant factors.



**Environmental, social, and governance (ESG) investment** becomes increasingly important in global business decision-making. The FinTech industry has been tackling, optimizing and iterating on several challenges in building the ability to interpret ESG reports:

### Content Tracing

ESG report readers need to quickly locate the sources of interpreted content, which requires good interpretation tools to trace and locate evidence down to the level of sentences and table cells.

### Table Processing

It is challenging to correctly extract the content from complex tables in ESG reports, because the headers and content in ESG reports are diverse and complex, and the structure is not consistent after the reports are converted to PDF text. Consequently, interpretation tools must be able to accurately extract data from tables with complex and special structures.

### Overall Accuracy

On the basis of the previous two processes, ESG reports must be interpreted with high accuracy as a whole. When assessing effectiveness and quality, we expect an accuracy rate of 95%.

Participants are required to design a multi-agent solution and **build a well-structured ESG report knowledge base capable of answering user questions**, of which the accuracy of answers should hit 95% and that of tracing should reach 95%.

In the daily work of financial analysts, they must be able to identify relevant market events, assess potential economic risks and scope of impacts, and analyze investors' behavior. Typically, financial events can only be identified via manual perception, integration, interpretation, and analysis with much human resources.

Participants are expected to set up two types of agents to improve the efficiency of analysts:

### Financial Event Identification

Retrospectively identify relevant financial events from the past two decades and identify new events in real-time, based on market information and research reports.

### Financial Event Interpretation

Determine the sector to which the event belongs and its impact scope, and analyze its impact on the corresponding sector in the market.





In the field of investment research, investors are faced with a vast amount of dispersed market information and data, including news, institutional research reports, financial reports, stock prices, and announcements etc.

Participants are required to design a set of agents that can **autonomously analyze massive market data** such as real-time news, financial reports, and stock market dynamics, **automatically generate investment decisions, and manage investment portfolios**. They are expected to optimize asset allocation in a dynamically changing market environment, adjust positions promptly, generate trade orders, and outperform benchmarks.

By the end of the competition, effectiveness of the agents in developing investment strategies is assessed by excess returns following their investment portfolio strategies against a selected benchmark (such as the CSI 300 Index).

AI is poised to change how people live and work. Travel planning is a complex and highly personalized activity. We expect the user experience can be significantly improved with the help of AI.

The challenge topic expects participants to design and implement an [intelligent travel planning assistant](#), which, based on specific user requirements, preferences, and budget, can intelligently recommend travel plans including but not limited to itinerary arrangement, visa application, transportation choices, and accommodation bookings.

### Basic Requirements

Intelligently formulate reasonable travel plans, according to the travel preference information data input by users, considering the nationality, age stage and traffic connection, and combined with the weather of the destination, travel days, number of people, holidays/peak season, visa processing, budget and other dimensions of information.

### Additional Requirements

- Mark the details and time of travel that need special attention to ensure that the time and cost information are true and valid.
- Optimize the travel route to reduce traffic time and ensure adequacy and efficiency.
- Pay attention to the interactive experience of user interface and provide personalized customization.





In many industries, customers expect to receive fast and accurate responses timely. Intelligent customer service systems, by virtue of the quick response and improving interaction quality, have become important tools for enterprises to provide high-quality customer services.

Participant is expected to design an intelligent customer service system, which should be capable of advanced natural language processing and understanding, so as to accurately and comprehensively respond to user inquiries. Moreover, the system should demonstrate excellent performance in providing solutions, handling queries, and delivering personalized customer experiences.

### Basic Requirements

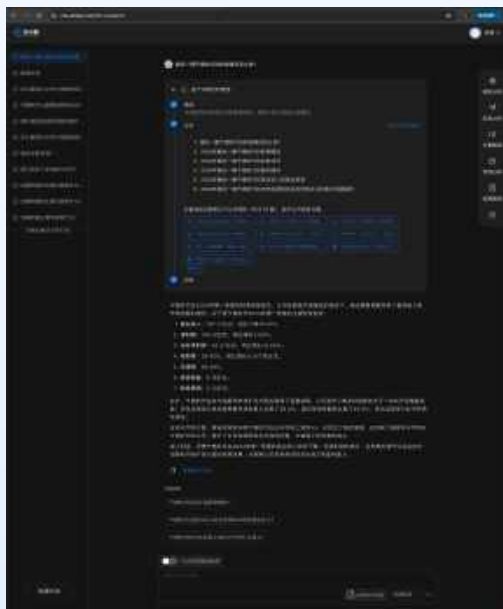
Answer questions truthfully and effectively according to users' questions.

### Additional Requirements

Use the multi-agent mechanism to improve the answering performance and avoid problems such as poor and improper expression. Simulate customer service tone and expressions that can be flexibly customized.

# We are expecting ...

A good case: a financial research intelligent assistant which uses 4 agents with different roles to collaborate to improve performance.



the fundamental mechanism



# We are offering: A ready-to-build framework

## Multi-agent collaboration framework: *agentUniverse*

agentUniverse is a framework for developing applications powered by multi-agent base on large language model. It provides all the essential components for building a single agent, and a multi-agent collaboration mechanism which serves as a pattern factory that allowing developers to build and customize multi-agent collaboration patterns. With this framework, developers can easily construct multi-agent applications, and share the pattern practices from different technical and business fields.

The framework will come with several pre-install multi-agent collaboration patterns which have been proven effective in real business scenarios, e.g.:

P-E-E-R pattern: This pattern utilizes four distinct agent roles: Plan, Execute, Express, and Review, to achieve a multi-step breakdown and sequential execution of a complex task. It also performs autonomous iteration based on evaluative feedback which enhancing performance in reasoning and analytical tasks.

We hope to see contestants using this framework to build similar multi-agent collaboration mechanisms which play a vital role in the competition.

For more information about the framework

<https://github.com/alipay/agentUniverse>



# The features and benefits of using *agentUniverse*

## AgentServe agent-to-ervice mechanism

### Integrated with LLM related open-source project and components

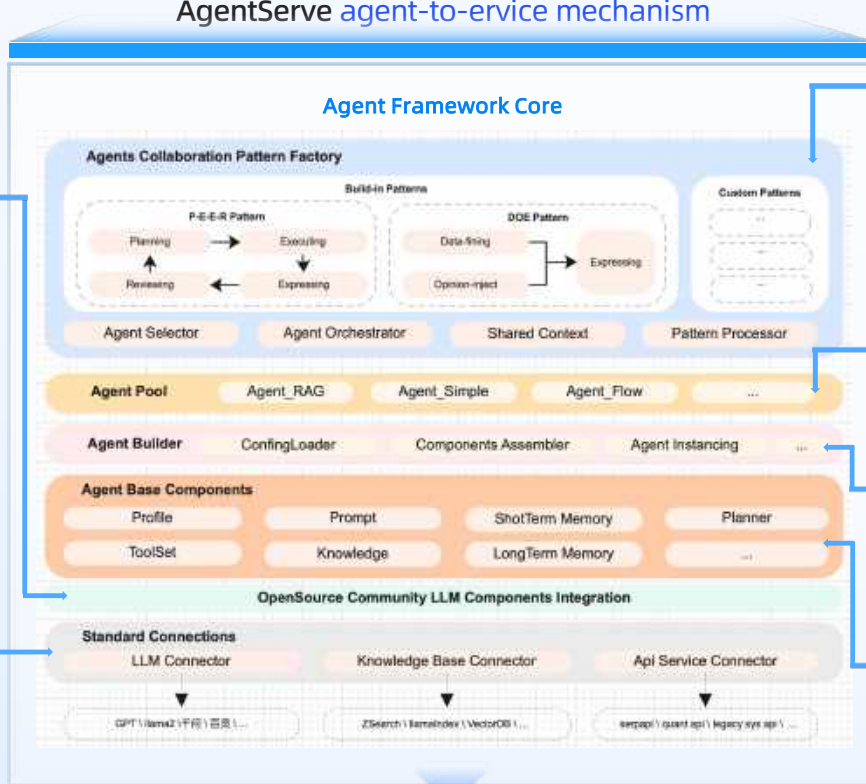
Popular projects like langchain, llamaIndex are ready integrated, which allows developers to use preferred technologies.

### Can easily connect to different LLMs\Knowledge Bases\system APIs

LLMs: adapted to popular LLMs like gpt\qwen\wenxin\kimi etc., only accessKey or acct&PW need to be configured.

KnowledgeBases: adapted to common rdb\kvdb\vector db

SystemAPIs: provides a standard plugin mechanism which allows LLM to call external API.



### Agent collaboration pattern factory

This is a mechanism for selecting and orchestrating different agent instances to achieved a proper function. Through the factory, agents can be arranged and connected and form a chain\tree\ring\graph, and context and memory are shared between agents. Several build-in patterns are provided, such as P-E-E-R pattern.

### Agent pool

Agent instances are managed in a pool, the multi-agent collaboration pattern factory can retrieve suitable agents to orchestrate them to achieved a proper function.

### Agent builder

A template mechanism is provided, which allows developer to set variable parameters to an agent template and get different agent instances.

### All essential components of an agent

Similar to other agent framework, all the basis components are included, like profile\prompt\long-short memory\toolset etc.

**agentUniverse supports multiple deployment methods:** stand-alone, distributed cluster, cloud (alibaba cloud, AWS, azure)

# Start-up Group Format

Stage	Description	Schedule
Sign Up	<ul style="list-style-type: none"> <li>Entrepreneurial teams (with a core team of at least 3 members) or seed enterprises are welcomed to participate in this group. Contestants can <b>only choose one group</b> from Challenge Group, Start-up Group, or Enterprise Group. <b>Within Start-up Group, we recommend contestants choose one direction.</b></li> <li>If the participant is an enterprise, its independent intellectual property rights (with intellectual property rights already authorized) should have no property disputes.</li> </ul>	Jun 3 - Jul 25
Material Submission	<ul style="list-style-type: none"> <li>Contestants should submit <b>full set of materials</b> including:               <ul style="list-style-type: none"> <li>Executable codes that are well annotated for readability by expert jury.</li> <li>Accessible online services of the application. User interface is strongly recommended.</li> <li>Technical Report.</li> <li>Business Plan.</li> </ul> </li> <li>Contestants are required to send the signed or stamped electronic versions (Word document + PDF document) to <a href="mailto:afac2024@service.alipay.com">afac2024@service.alipay.com</a></li> </ul>	Jun 3 - Jul 26
Preliminary Expert Evaluation	<ul style="list-style-type: none"> <li>The materials submitted will be reviewed and scored by experts, and the finalists will be selected according to preliminary scores.</li> </ul>	Early Aug - Mid Aug
Finals Roadshow	<ul style="list-style-type: none"> <li>The final will be conducted via on-site roadshows in Shanghai tentatively. The roadshow order will be determined by drawing lots by team representative.</li> <li>The roadshow will involve a PowerPoint presentation and Q&amp;A session followed with experts. Expert jury will give final score comprehensively based on participants' business ideas, technical practice, and live performance. The final ranking will be determined based on the scores at on-site review.</li> <li>The presentation will be recorded and probably showed on competition official media channel.</li> </ul>	Mid Aug - End of Aug
Public Notice Period	<ul style="list-style-type: none"> <li>During the public notice period, the organizing committee will accept external supervision and investigation. If any fraudulent behavior is found, the contestant's awards will be immediately revoked.</li> </ul>	End of Aug - Early Sep

# Registration channel has officially opened



The registration channel for the AFAC2024 Financial Intelligence Innovation Competition has officially opened. The competition will proceed as follows:

## Essential detail

Online registration starts on June 3rd.

Preliminary selection of results is scheduled for July.

Finalists will present in August

The competition's outcome summary and awards ceremony will be held at INCLUSION in Shanghai in September.

## Official website link:

<https://tianchi.aliyun.com/specials/promotion/afac2024>



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You won't be alone during the competition



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