

Creation of Creations: Explainable and Controllable Interfaces in Human-Agent Co-Creation based GenFlow

Alibaba Cloud Design Creativity Center

Workshop Proposal for: ChineseCHI 2024 Workshop, November 22



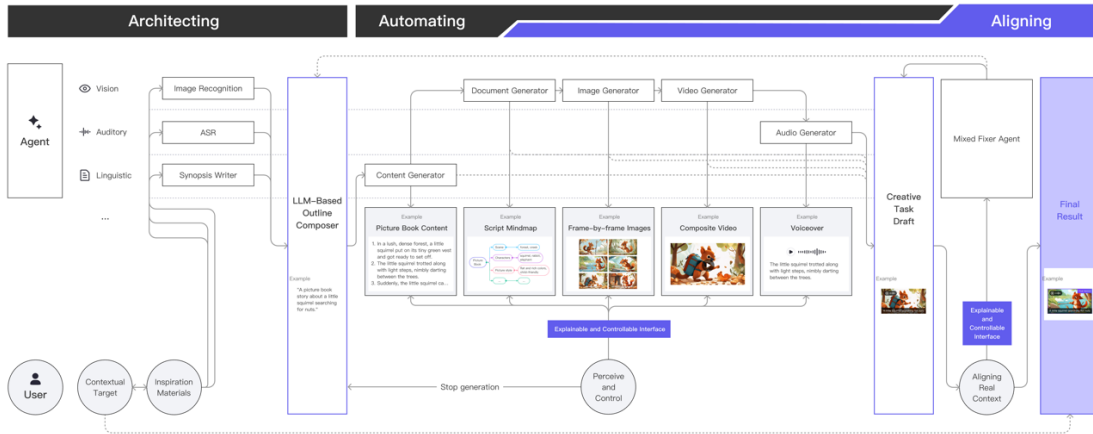
Introduction

With the development and commercialization of generative artificial intelligence (GenAI) technology, GenAI-based agents have been widely adopted in creative activities, offering diverse sources of inspiration results. Human-agent co-creation is a complex, multi-stage process in which each phase requires both divergent and convergent thinking, gradually approaching the creative objectives through multiple rounds of interaction. However, a well-defined framework for user experience design in this process is currently lacking.

We proposed GenFlow, a mixed initiative human-agent interaction framework designed for complex creative tasks. By emphasizing the provision of explainable and controllable interfaces for mixed-modal agents, this framework enhances the creative experience and quality of complex tasks such as picture books, animated posters, and meeting summaries. Built on the GenFlow, we designed an agent platform that integrates foundational multimodal GenAI capabilities to support the creation and use of creative agents. By the design of controllable and interpretable user interfaces, the platform facilitates human-agent co-creation, enabling the production of higher-quality creative outcomes and improving overall system usability.

In this workshop, we aim to introduce the GenFlow framework, inviting participants to engage in hands-on use of the intelligent agent platform to experience co-creation with agents, as well as to discuss possible expansions of the framework. Additionally, participants will explore the impact and potential of explainable and controllable interfaces in human-agent co-creation, sharing insights based on their hands-on experiences to contribute to enhancing user experience and creative quality in human-agent co-creation.

This workshop provides a valuable reference and practical platform for communities in design, creativity, and AIGC, promoting design thinking and innovation in the era of GenAI.



Objectives

In this workshop, we invite participants to:

- Understand the concept and case studies of human-agent co-creation based on GenFlow.
- Experience the agent platform, create an agent, and use it to create creative works.
- Contribute ideas and feedback to human-agent co-creation.
- Engage in creative discussions on the possibilities, impacts, and potential of controllable and interpretable interfaces in human-agent co-creation, contributing innovative insights to the HCI and AIGC communities.

Participants

- 20 to 25 participants
- Researchers, students, and practitioners in design, media arts, artificial intelligence, AIGC, or other related fields, and anyone interested in creative design, co-creation methods and practices.

Equipment needed

- Please bring your personal phone, charged, ideally with a mobile internet connection.
- It is highly recommended to bring your own laptop for hands-on activities, if unavailable, a few laptops provided by organizers will be available for group use.

Equipment Provided

- Projector, big screen and microphone for the workshop introduction and platform demonstrations.
- Whiteboard and markers for public notes and guidance.
- Pens, sticky notes and paper for notes drawings and brainstorming.
- 3 laptops as a backup for participants.

Duration and Location

9:00-12:00

School of Design, Sustech, Nanshan IPark, Building C1, 1011

Schedule and Activities

9:00-9:15 Introduction

- Introduction to the workshop and its objectives.

- Introduction to the GenFlow framework: the concept and framework of human-agent co-creation, and explainable and controllable interfaces in human-agent co-creation.

9:15-9:30 Platform Demonstration

- Introduction to the agent platform features and functionalities.
- Demonstration of how to use the platform to create agents for creative activities.
- Demonstration of how to use agents.

9:30-9:40 Setup for Hands-On Experience

- Assist participants in accessing the agent platform on their personal phone and pc.

9:40-10:15 Hands-On Experience

- Participants use the platform to create a agent for a specific scenario.
- Participants use the created agent to generate creative works.
- Encourage participants to "think aloud" to share any issues, feedback and insights.

Coffee Break

10:30-10:45 Cross-Experience and Free Sharing

- Participants experience agents created by others.
- Encourage participants to publicly share their creative process and outcomes, as well as any issues, feedback, and insights from their experiences.

10:45-11:15 Feedback and Discussion

- Invite participants to reflect on their experience using the platform.
- Encourage participants to share their feedback regarding the platform's usability, user experience, and desired features.

11:15-11:30 Explainable and Controllable Interfaces

- Introduce the explainable and controllable interfaces in the agent platform.
- Encourage participants to share their feedback on the controllability and explainability of the platform.
- Showcase more examples of explainable and controllable interfaces in human-agent co-creation.
- Encourage participants to share their feedback on these examples, compare them with the current situation, and provide their opinions.

11:30-12:00 Discussion and Future Work

- Encourage participants to discuss and refine the GenFlow framework based on the hands-on experience with the platform.
- Explore the impact and potential of explainable and controllable interfaces in human-agent co-creation.
- Discuss potential improvements and future directions for the design of human-agent co-creation.
- Summarize the key conclusions of the workshop.

ChineseCHI 2024 Workshop Proposal

Creation of Creations: Building Multi-Modal Agents for AIGC Creative Tasks based GenFlow

创作之创作：基于 GenFlow 构建用于 AIGC 创作的多模态智能体

组织者 Organizers

Alibaba Cloud Design - Creativity Center
阿里云智能设计部 - 创新中心

课题 Title

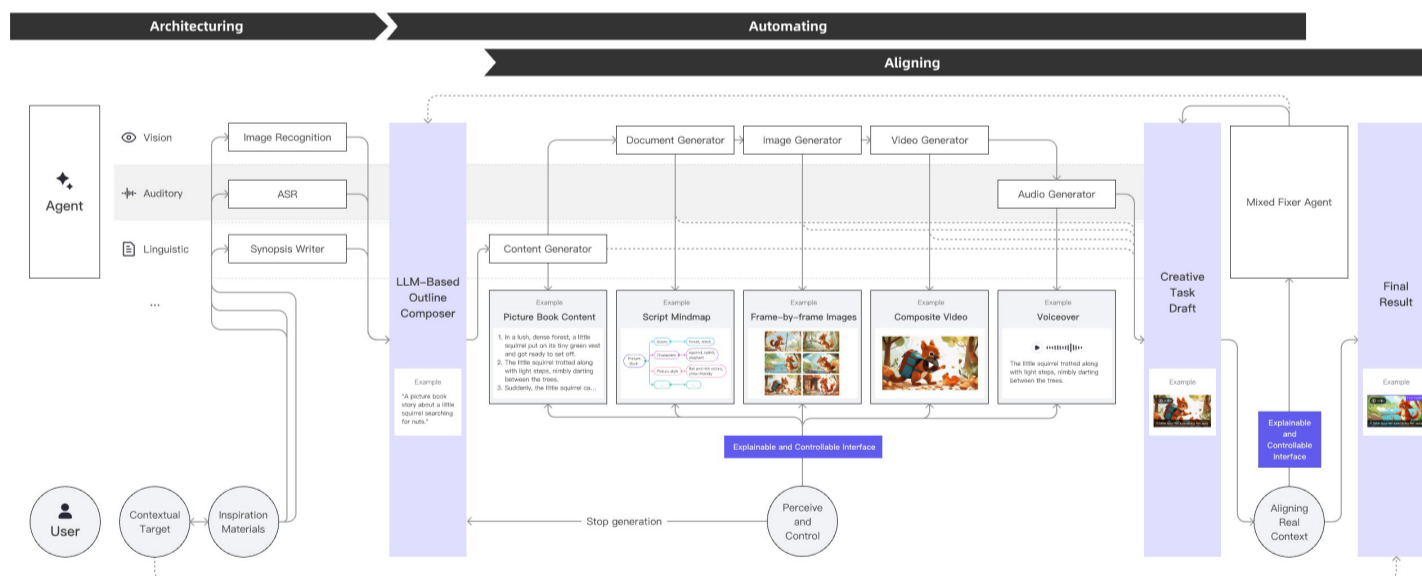
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介绍 Introduction

本工作坊将介绍 GenFlow，一种多模态创意任务中的人-智能体系统协同创作框架。通过案例展示如何基于 GenFlow 协作框架，引导开发者制作出“从一个灵感到一个内容”的符合用户创作行为的智能体。在实践操作中，工作坊参与者将参加到三项设计和研究活动中：（1）使用智能体创作平台，基于 GenFlow 框架引导构建包含图像、视频、语音及文本等多模态 AI 原子能力的创意智能体；（2）基于（1）中创作的智能体，生产高质量的创意作品；（3）交叉评估，讨论 GenFlow 框架在多模态人-智能体协同方面的可能性。此次工作坊为设计、创意与交叉学科学者、从业人员与爱好者提供了有益参考与实践平台，以促进 GenAI 时代的设计思考与创新。

主题和动机 Topics and motivation

随着生成能力的不断演进和算法能力产品化，基于生成式 AI 的智能体已经成为创意活动中不可或缺的工具。这些智能体能够生成图像、视频、语音及文本等丰富的多模态内容，从而为创意活动提供广泛的灵感来源与实际成果。创作是一个复杂且多阶段的过程，每个阶段都涉及反复的思维发散与收敛，并通过多轮与智能体的互动迭代过程才能逐步接近创意目标。我们提出一种面向复杂创作任务的多模态人-智能体交互框架 GenFlow，通过强调在创作的不同阶段提供多种模态的可解释和可控制界面，可以提升绘本、叙事漫画、动态海报、会议记录等复杂创作任务的创作体验和创作质量。在本次工作坊中，我们首先将向参与者介绍 GenFlow 框架，并通过案例分享和实操，共同探讨、完善和扩展人-智能体协同创作框架。



“创作，为了启发创作的灵感”，AI 创作能力普惠更多人群依赖于社区中更多高质量创作类智能体的出现。本次工作坊中，我们将通过案例分享、实操演示和开放体验，引导参与者创建出基于 GenFlow 的符合用户创作需求与行为的智能体，以帮助使用者简单、快速、灵活的创作高质量的创意作品，实现“从一个灵感到一个内容”。

多模态智能体平台

集成多模态AI原子能力，创建用于AIGC创作的多模态，助力创作者实现“从一个灵感到一个内容”



Chinese CHI 2024 会议以“创新·创造·整合”为主题，本次工作坊旨在探索如何利用先进协同框架和相关工具，整合多模态 AI 原子能力，以增强在创作活动中的创造力和创作质量。在本次工作坊中，参与者将有机会直接体验到多模态智能体在创意设计中的应用，并鼓励参与者创建更多优质智能体，使 HCI 和 UX 社区中的更广泛的学者、从业人员和爱好者受益。

目标和预期结果 Goals and expected results

目标 Goals

1. 向参与者介绍 GenFlow-多模态创意任务中的人-智能体系统协同创作框架；
2. 引导参与者基于 GenFlow 框架，利用多模态智能体平台，构建能够满足用户特定创作需求与行为模式的智能体；
3. 在上述基础上，共同探讨、完善和扩展 GenFlow 框架，讨论其在多模态人-智能体协同方面潜力和实际应用价值。

预期结果 Expected results

1. 参与者了解 GenFlow 人-智能体协同创作框架的概念、原理及架构；
2. 掌握创建符合用户创作需求与行为模式的智能体的方法和工具，并实操创建智能体实例；
3. 收集并整合来自参与者关于 GenFlow 框架的讨论内容，为进一步优化框架功能、增强其在多模态人智协同中的实用性奠定基础，同时促进学术界与产业界对该主题的深入研究与讨论。

工作坊形式 Format

本次工作坊的形式包含以下几个部分：

0.1 讲座介绍（约 30 分钟）

由主讲人进行主题演讲，介绍多模态创意任务中的人-智能体系统协同创作框架，包括人-智能体在创意任务的协同需求和交互模式、基于 LLM 的多智能体系统原理及人机协同框架。

0.2 案例与实操演示（约 30 分钟）

分享人-智能体协同创作案例，实操演示如何使用多模态智能体平台，进行用于 AIGC 创作的多模态智能体的设计、开发与协同创作。

0.3 开放体验（约 60 分钟）：

参与者开放体验与实操多模态智能体平台，引导参与者创建出基于 GenFlow 的符合用户创作需求与行为的智能体。

0.4 交叉评估与讨论（约 60 分钟）：

参与者交叉体验（3）中创建的智能体，分享创作作品，并对整体的创作体验进行评估；最后共同探讨、完善和扩展 GenFlow 框架在多模态人-智能体协同方面的可能性。

参与者 Participants

本工作坊计划招募 20-25 名参与者。

欢迎在智能设计、创意设计、AIGC、人工智能、大模型或其他相关领域具备初级经验的教师、学生，以及上述领域或独立创作者、创意媒体内容生产者等创意领域从业人员参加本次工作坊。