在人类表现出的各种认知过程中，最重要的是学习和回忆的能力。人类的记忆被认为是自动联想的。它可以将学到的概念储存在记忆中，并在看到部分或破碎的模式时回忆起来。在人工智能的许多研究中，我们都试图模仿人脑的行为。来自人工智能的想法为解释人类学习的各个方面提供了一个有用的形式理论。反过来，来自认知科学和神经科学的想法可以为人工智能研究提供方向，使算法更像人类。

在类似人类的认知方面已经有了很多研究。Franklin et al. 提出了事件认知的结构化事件记忆模型(SEM), 说明了人类在事件分割、记忆和概括方面的能力, SEM可以扩展到高维的输入空间，为自然的视频数据产生类似人类的事件分割，并说明了一系列广泛的记忆现象[44]。Sun et al. 提出了一个新的模型Human-Like Visual Cognitive and Language-Memory Network for Visual Dialog (HVLM)，以模拟人类视觉系统中的全局和局部双视角认知，从而全面理解图像。

KID（知识-信息-数据）模型作为一种认知模型，最初是由Huang的研究团队提出的。它旨在模仿人类的认知学习，将人类的信息处理抽象为以下三个阶段：数据解释、信息同化和知识实例化。它是一个具有高级抽象的模型和通用框架，可以容纳各种现实的认知学习应用。[42]仔细研究了KID模型的组成部分和 "记忆网络 "架构，以了解它们之间的关系，并发现记忆网络可以提供KID模型的部分实现。[43]关注长期记忆的关联记忆，完善了KID模型的记忆过程，提出了一个具有新型神经网络存储架构的关联记忆框架，以模拟人类的关联记忆能力。

认知模型的开发通常是用Python这样的高级语言设计的，开发费力，性能不加，Veselý et al. 提出了特定领域的编译工具Distill来加速认知模型，并为认知科学家提供用灵活的高级语言开发模型的能力。类人认知方面已有一定的研究，但将类人记忆应用于大规模摄像头下的人脸隐私保护的研究很少，本文从类人认知的角度探讨了类人记忆的新应用领域，并为探索大规模摄像头城市应用的新模型进行了基础理论研究。

Of the various cognitive processes exhibited by humans, the most important is the ability to learn and recall. Human memory is thought to be automatically associative. It can store learned concepts in memory and recall them when it sees partial or broken patterns. In much of the research in artificial intelligence, we have tried to mimic the behaviour of the human brain. Ideas from AI provide a useful formal theory for explaining aspects of human learning. In turn, ideas from cognitive science and neuroscience can provide direction for AI research to make algorithms more like humans.

There has been much research in human-like cognition. Franklin et al. proposed a structured event memory model (SEM) of event cognition, illustrating human abilities in event segmentation, memory and generalisation, SEM can be extended to a high-dimensional input space to produce human-like event segmentation for natural video data, and illustrates a wide range of memory phenomena [44]. sun et al. et al. proposed a new model Human-Like Visual Cognitive and Language-Memory Network for Visual Dialog (HVLM) to simulate global and local dual-view cognition in the human visual system to comprehensively understand images.

The KID (Knowledge-Information-Data) model was originally proposed by Huang's research team as a cognitive model. It aims to mimic human cognitive learning by abstracting human information processing into the following three stages: data interpretation, information assimilation and knowledge instantiation. It is a model with high-level abstractions and a generic framework that can accommodate a variety of realistic cognitive learning applications. [42] scrutinised the components of the KID model and the 'memory network' architecture to understand the relationship between them and found that memory networks can provide a partial implementation of the KID model. Focusing on associative memory for long-term memory, [43] refined the memory process of the KID model and proposed an associative memory framework with a novel neural network storage architecture to simulate the associative memory capacity of humans.

Cognitive models are typically developed in high-level languages such as Python, which is laborious to develop and does not add performance. Veselý et al. proposed a domain-specific compilation tool, Distill, to accelerate cognitive models and provide cognitive scientists with the ability to develop models in a flexible high-level language. There has been some research in human-like cognition, but little research has been done on applying human-like memory to face privacy protection under large-scale cameras. This paper explores new application areas of human-like memory from the perspective of human-like cognition and provides a grounded theory study for exploring new models for large-scale camera urban applications.