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(81) 指定国 (除另有指明，要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG,

(54) **Title:** RECOMMENDATION METHOD AND RELATED DEVICE

(54) 发明名称: 一种推荐方法及相关装置

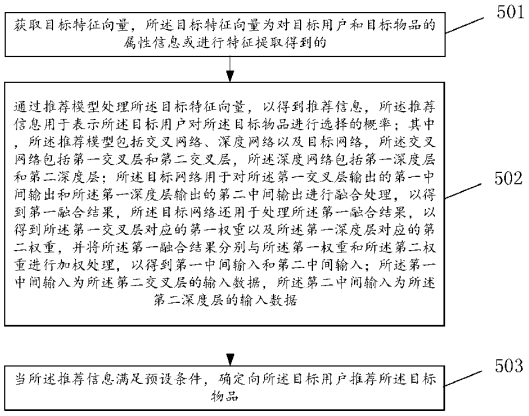


图 5

501 Obtain a target feature vector, the target feature vector being attribute information of a target user and a target object or being obtained by feature extraction

502 Process the target feature vector by a recommendation model to obtain recommendation information, the recommendation information being used for indicating the probability of the target user selecting the target object, wherein the recommendation model comprises a cross network, a deep network, and a target network, the cross network comprises a first cross layer and a second cross layer, the deep network comprises a first deep layer and a second deep layer, the target network is used for performing fusion processing on a first intermediate output outputted by the first cross layer and a second intermediate output outputted by the first deep layer to obtain a first fusion result, the target network is also used for processing the first fusion result to obtain a first weight corresponding to the first cross layer and a second weight corresponding to the first deep layer, and respectively using the first weight and the second weight to perform weighing processing on the first fusion result so as to obtain a first intermediate input and a second intermediate input, the first intermediate input is input data of the second cross layer, and the second intermediate input is input data of the second deep layer

503 When the recommendation information satisfies a preset condition, determine to recommend the target object to the target user

(57) **Abstract:** The present application discloses an information recommendation method, capable of being applied to the field of artificial intelligence. The method comprises: obtaining a target feature vector; and processing the target feature vector by a recommendation model to obtain recommendation information, the recommendation model comprising a cross network, a deep network, and a target network, the target network being used for performing fusion processing on a first intermediate output outputted by a first cross layer and a second intermediate output outputted by a first deep layer to obtain a first fusion result, and the target network being also used for processing the first fusion result to obtain a first weight corresponding to the first cross layer and a second weight corresponding to the first deep layer, and respectively using the first weight and the second weight to perform weighing processing on the first fusion result so as to obtain a first intermediate input and a second intermediate input. The target network in the present application learns the parameter distribution of heterogeneity for different interactive networks, excessively sharing is avoided, and an interaction signal between different interactive networks is introduced, thereby improving the prediction precision of the model.

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**(84) 指定国**(除另有指明，要求每一种可提供的地区保护)：ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

**本国际公布**:
— 包括国际检索报告(条约第21条(3))。

**(57) 摘要**：本申请公开了一种信息推荐方法，可以应用于人工智能领域，方法包括：获取目标特征向量，通过推荐模型处理目标特征向量，以得到推荐信息，推荐模型包括交叉网络、深度网络以及目标网络，目标网络用于对第一交叉层输出的第一中间输出和第一深度层输出的第二中间输出进行融合处理，以得到第一融合结果，目标网络还用于处理第一融合结果，以得到第一交叉层对应的第一权重以及第一深度层对应的第二权重，并将第一融合结果分别与第一权重和第二权重进行加权处理，以得到第一中间输入和第二中间输入。本申请中的目标网络为不同的交互网络学习异质性的参数分布，避免过度的共享，引入不同交互网络之间的交互信号，提高了模型的预测精度。