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(54) **Title:** METHOD AND SYSTEM FOR OPTIMIZING USER GROUPING FOR ADVERTISEMENT

(57) **Abstract:** Methods, systems, and apparatus, including computer programs encoded on computer storage media, for grouping users are provided. One embodiment of the methods includes: dividing a plurality of users targeted by the an advertisement candidate into a plurality of user buckets, wherein each of the plurality of user buckets is associated with a first conversion score; obtaining a trained prediction model corresponding to the advertisement, wherein the trained prediction model is able to predict a conversion score based at least on the first conversion score associated with a user bucket and a second conversion score associated with a group of user buckets comprising the user bucket; constructing an optimization model using the trained prediction model, wherein an objective function of the optimization problem is to maximize a total conversion with a grouping strategy represented by a plurality of decision variables; solving the optimization problem with a solver to determine values for the plurality of decision variables; assigning the plurality of user buckets to one or more user groups for the advertisement candidate according to the grouping strategy.

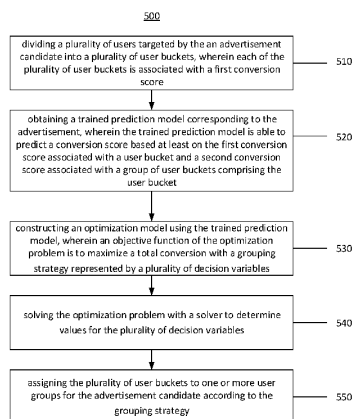


FIG. 5

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