

Abstract

A system is described for determining nonlinear surge pricing. In general, the system obtains historical data relating to uses and provision of a service by users and providers, respectively, and an original nonlinear surge pricing model and service parameters. From that data it determines a user pricing elasticity model and a provider pricing elasticity model and optimises an objective function based on a weighted combination of a predicted number of uses of the service and a predicted gross merchandise value (predicted GMV), the original nonlinear surge pricing model, service parameters and one or both of the user pricing elasticity model and the provider pricing elasticity model. That optimised objective function is an updated model for non-linear surge that is used to produce an augmented surge multiplier for a new request for use of the service, based on the optimised objective function and original surge multiplier.

[Figure 1]