

A NONPARAMETRIC LEARNING APPROACH TO THE PRICING AND PROVISIONING PROBLEM IN CLOUD SERVICES

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The emerging cloud computing service market aims at delivering computing resources as a utility over the Internet with high quality. The emerging nature of this market makes service demand highly uncertain. Traditional pricing and provisioning solutions that employ classical demand estimation approaches often fail to capture the dependence between the price-sensitive demand and the service level associated with the cloud service. As a result, those approaches can hardly guarantee convergence to the optimal offering. We present a non-parametric learning approach that provides much improved offering solutions. This learning approach could be used to calibrate the model and converge to the optimal solution. Though our model is developed in the context of cloud computing, the methodology can be applied to various applications with model uncertainty.