Statistical learning for individualized asset allocation

Rui Song

North Carolina State University
E-mail: rsong@ncsu.edu

Abstract: We establish a statistical learning framework for individualized asset allocation. A high-dimensional Q-learning methodology is proposed for continuous decision making. The proposed methodology enjoys desirable theoretical properties and facilitates valid statistical inference for optimal values. Empirically, the proposed statistical learning framework is exercised with Health and Retirement Study data. The results show that our proposed optimal individualized strategy improves individual financial well-being and surpasses benchmark strategies under a consumption-based utility framework.