

NoQ an Online Scheduling and Token Generation for Bank Customers Queue Management System

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Abstract: Banks are the places where there is heavy flow of customers every day. Long queues are a big alarm sign for banks and also for the customers. In India every bank is offering digital service channels to their customers to facilitate them. However, when customers come to visit the bank at the physical branches it could get very difficult to manage the customers and maintain a good customer experience. Another big challenge is the health and safety concerns. The bank branch occupancy limits and the social distancing rules are also adding to the queue management problems and making it difficult to provide a good quality service and satisfactory customer experience. The market trends and customer's expectations have also been changed, now a day's people are more adoptive and inclined towards digital interaction. A high-tech queue management system can bridge the gap between the physical and the digital customer experience and it can significantly improve the customer journey. In this paper, design and development a virtual queue management system using Deep Q Learning algorithm that helps reduce customer queues with fully-functional features. This system has a smooth and innovative user interface so that novice users can use it easily. A virtual queue replaces a physical line by placing customers in an invisible or online queue, also known as a virtual waiting room. By booking appointments remotely where customers can wait outside the banks' premises, this digital queue ensures customers don't have to wait for their turn in a crowded waiting room or stand in a long line thus minimizing human interaction and abiding by social distancing rules. The system is a perfect combination of innovation and technology that helps to provide a better customer experience

Keywords: Deep Learning, virtual queue, virtual waiting room

