随着互联网经济的蓬勃发展，淘宝、京东等网上购物模式的逐渐兴起，大量线下实体经济转入线上，从而导致商品资源快速膨胀并出现了严重的信息过载问题，这使得具有潜在用户的商品很容易被庞大的商品信息量、同行的恶意竞争、不合理的推广方式等原因在互联网经济浪潮中埋没。

With the vigorous development of Internet economy, an upsurge of the online shopping, such as Taobao, JDcom, is in the making. A large amount of offline entity economy goes online, resulting in rapid expansion of commodity resources and serious information overload, which makes commodities with potential users easily submerged in the wave of the Internet economy due to many reasons such as the huge amount of commodity information, malicious competitions of the peers, and irrational promotion methods.

本课题以此为出发点，通过线上征稿和众筹的方式由消费者决定商品的发布与否，商品主要突出时尚、活力、创新、高品质等元素，面向较为年轻、小众的消费群体，为其打造优质的网上购物平台，并结合推荐算法帮助用户挖掘可能感兴趣的商品。

This researcher takes this as the starting point and gives consumers the right to decide whether or not to release a commodity through online solicit contribution and crowdfunding. The products mainly highlight fashion, vitality, innovation, high quality, and other elements to create a high-quality online shopping platform for relatively young and small-scale consumers, and incorporate the recommendation algorithm to help users find commodities that might be of their interest.

本文设计并实现了商城及推荐系统，商城部分主要基于SSM(Spring,

SpringMVC,Mybatis)主流后端框架，设计实现了用户单点登陆、用户注册、订单管理、购物车管理和限时商品秒杀等功能，并结合Redis、RebbitMQ等服务中间件，提高系统吞吐量和响应时间。此外在系统的设计和实现过程中对系统的实时性、稳定性、健壮性等方面做了相关优化工作。推荐系统部分主要设计实现了推荐算法的服务框架，采用策略模式灵活调用具体的实现算法，并对基于user的协同过滤推荐、基于item的协同过滤推荐和基于内容的推荐的相关原理和实现进行详细介绍。

This paper designs and implements the mall and recommendation systems. The part of the mall system is mainly based on SSM (Spring, SpringMVC, Mybatis) mainstream backend framework, and designs and enables functions such as one-click-signing-in for users, user registration, order management, shopping cart management, and flash prices for a limited time. Besides, it also improves the throughput of the system and reduces response time with the integration of Redis, RebbitMQ and other service middleware. In addition, relevant optimization has been made to improve the system's real-time performance, stability, robustness and other aspects during the process of the system design and implementation. The part of the recommendation system mainly designs and implements the service framework of the recommendation algorithm. It flexibly calls specific implementation algorithms applying the strategy pattern, and introduces in detail theories and implementations relevant to user-based collaborative filtering recommendation, item-based collaborative filtering recommendation and content-based recommendation.

整个系统在商城服务功能基本完善和稳定的前提下，通过对部分模块并发瓶颈的分析，引入相关技术提升了系统高并发处理能力。通过推荐算法，根据用户历史行为和特征信息为其提供个性化的推荐服务，提升了用户购物体验。

The whole system draws on relevant technologies and improves the high concurrent processing capacity by analyzing the concurrency bottleneck of part of modules under the premise of the basic completion and stability of the mall service functions. Through the recommendation algorithm, it can provide customized recommendation service according to users' historical behavior and characteristic information and improve their shopping experience.