

# **The influence of House Prices, Social Network, and Income to Personal Consumption of Milk Tea**

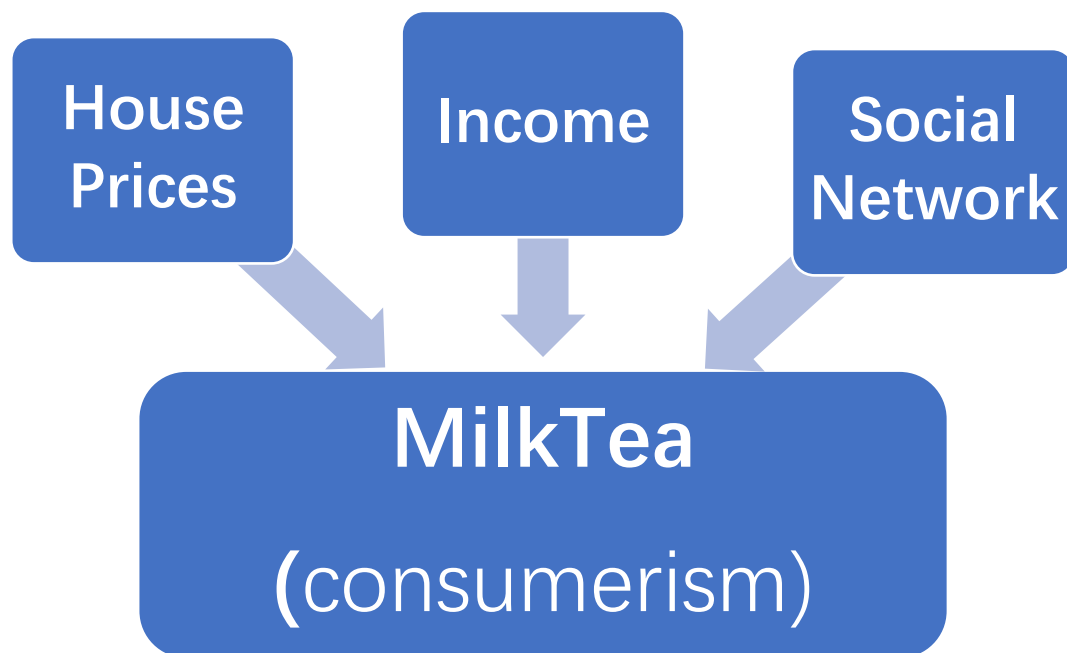
## **Project Summary**

### Intellectual Merits of the Proposal Activity

The project is going to dig up the relationship between a micro variable, milk tea consumption, and some factors such as house prices, social network and personal income. The connection may look very low at first glance, but we believe it's will lead to some very interesting results.

### Broader Impacts of the Proposal Activity

In our assumption, milk tea stands for “middle consumption”, which means it is in middle price and most serve middle class, compared to high purchase such as cars and house. So, we believe we can somehow measure people's consumerism and hedonism inclination by milk tea consumption. With this assumption, the project is about people's consumerism and hedonism inclination and House Prices, Social Network, and Income. We are going to research, when China house prices keep rising, how people would face it. And also, how income influence people's consumerism. Is social network a important reason for people to keep high “middle consumption”? These 3 questions is our major consideration in the project.



## **Project Description**

### **1. Research Objectives**

#### **1.1 Intellectual Merit of the Proposed Work**

Our research involves several questionnaires, statistical analyses and social media research.

After collecting data, we plan to use 30% of our original data, using Deep Learning to make a CNN to show the relationship between all the input factors and the personal consumption of milk tea. Then we are going to use the rest 70% data to test our CNN model for its accuracy.

#### **1.2 Broader Impact of Proposed Work**

Our research focus on a vital problem: modern consumerism. With the fact that house prices keep rising, we assume that at first people may have weaker consumerism tendency, but when it goes high enough to kill most people's will to buy a house, the tendency to consumerism is more likely to stronger even than low house price days.

In another hand, social network somehow boots the trend. If someone in a friend cycle post a photo of an Internet popular(网红) milk tea, with nowadays

developed social media, it will soon separate to the whole social cycle, and with another member join in and post another photo to this and other cycles, this trend is separate very fast.

As for income, traditional research and common sense may indicate that it is the most important factor to consumerism. But because of the insurmountable gap between house price and "middle consumption", when one's income reach the middle level, it will become less sensitive to income change.

### **2. Another Technical Section**

#### **2.1 Collecting Data**

In the project, wo plan to do questionnaire both online and offline. Online section will be in the social media such as weibo, wechat, qq and so on. Offline section will be focused on so popular milk tea shop, such as coco, yidiandian(一点点),

heytea(喜茶). The questionnaire will include questions about the frequency and spend for milk tea, and the income range, their willingness of buying house, and their social network attitude to milk tea.

Also, we are supposed to use statics about religion house price, personal income. What's more, social media data is important, too. We plan to use Web Crawler to collect social media data.

## 2.2 Model Building

We are going to use deep learning to build CNN to show the relationship of factors, which has shown great advantage when building complex multi-factor model. Since this is a proposal rather than a formal paper, we will skip some technical details.

## 3. Statement of Work

### 3.1 Schedule

Time	Event
Year 1	Collecting data
Year 2	Model build and test by collected
Year 3	Testing by new static data

### 3.2 Team Composition and Expertise

Name(all faked)	Job	Budget
Steve	investigator	5000 dollars
David	investigator	5000 dollars
Emma	investigator	5000 dollars
Jacob	Deep learning engineer	10000 dollars
John	Deep learning engineer	10000 dollars
Amanda	Web engineer	8000 dollars
Anne	officer	6000 dollars

We need investigators to do offline questionnaires;

We need deep learning engineer to build model.

We need web engineer to collect web data and make online questionnaire.

Finally, we need an officer to help all the researcher in routine work.

### **3.3 Connections to Education and Outreach**

In education, modern consumerism is something we always keep students away from. If our project could prove our prediction, we have to admit that consumerism is not a problem can be solved by education, but a inevitable tendency when house price go wild.

When house price is too high, people will abandon hard working for buying house, but turn to hedonism. The all social we become really bad.