经济大数据与 Python 应用

Intro

课程简介

- 课程名称:经济大数据与Python应用
- 教材:Python Data Science Handbook
- 课件:英文
- 网页: py.chenzhou.link
 - 代码主流
 - 便于查询
- 课时:32 (8周)
- 学习通: 28039493
- 考试: 笔试
- 成绩:期末 (70%),**作业+考勤** (30%)
- 往年考试情况

授课教师

陈洲

- 复旦大学经济学博士
- 邮箱 econ@chenzhou.link
 - 注意邮件格式
- 主页 chenzhou.link
- 工作室 9-453

课程要求

原则: 求学

- 课堂上,主动发现问题
- 总结每次课的内容
 - 一定要交作业

具体要求

- 集中注意力
 - 课前做好付出精力的准备
- 带好设备
 - 无论教室还是机房
 - 不操作,学不会
- 有任何不明白的地方,立刻打断老师
- 课后随时找老师
 - 充分利用老师

课程安排

五个部分

- Jupyter
- Numpy
- Pandas
- Matplotlib
- ML

内容紧凑

Python in Economics

- Web scraper
- Machine learning
 - Text data
- Scientific computing
 - Model estimation

BLP-type random coefficients logit models

Introduction

PyBLP is a Python 3 implementation of routines for estimating the demand for differentiated products with BLP-type random coefficients logit models. This package was created by Jeff Gortmaker in collaboration with Chris Conlon.

Development of the package has been guided by the work of many researchers and practitioners. For a full list of references, including the original work of Berry, Levinsohn, and Pakes (1995), refer to the references section of the documentation.

Nevo (2001 ECMA)

Econometrica, Vol. 69, No. 2 (March, 2001), 307-342

MEASURING MARKET POWER IN THE READY-TO-EAT CEREAL INDUSTRY

By Aviv Nevo¹

The ready-to-eat cereal industry is characterized by high concentration, high price-cost margins, large advertising-to-sales ratios, and numerous introductions of new products. Previous researchers have concluded that the ready-to-eat cereal industry is a classic example of an industry with nearly collusive pricing behavior and intense nonprice competition. This paper empirically examines this conclusion. In particular, I estimate price-cost margins, but more importantly I am able empirically to separate these margins into three sources: (i) that which is due to product differentiation; (ii) that which is due to multi-product firm pricing; and (iii) that due to potential price collusion. The results suggest that given the demand for different brands of cereal, the first two effects explain most of the observed price-cost margins. I conclude that prices in the industry are consistent with noncollusive pricing behavior, despite the high price-cost margins. Leading firms are able to maintain a portfolio of differentiated products and influence the perceived product quality. It is these two factors that lead to high price-cost margins.

KEYWORDS: Discrete choice models, random coefficients, product differentiation, ready-to-eat cereal industry, market power, price competition.

Installation

Miniconda or Anaconda

- Anaconda official page:
 - https://www.anaconda.com/
- Miniconda from the Tsinghua mirror:
 - https://mirrors.tuna.tsinghua.edu.cn/anaconda/miniconda/
 - Ensure NO CHINESE characters in user folder names.

Anaconda and Python

- Python with pre-built libraries
- Package manager conda
- Virtual environment management / reproducibility

Miniconda and Anaconda

- A small version of Anaconda
 - Save disk space
- A subset of packages
- Able to install all other packages

Demo

- Install Miniconda
- Install packages using conda

!!!!! Install all packages

conda install numpy pandas scikit-learn matplotlib seaborn jupyter

Install other packages

conda install packagename

conda install cowpy
cowpy "Hello Python!"

PyCharmVisual Studio Code

Other tools (optional)

