

Time Series Analysis on U.S. Citizen Air Travel to Canada

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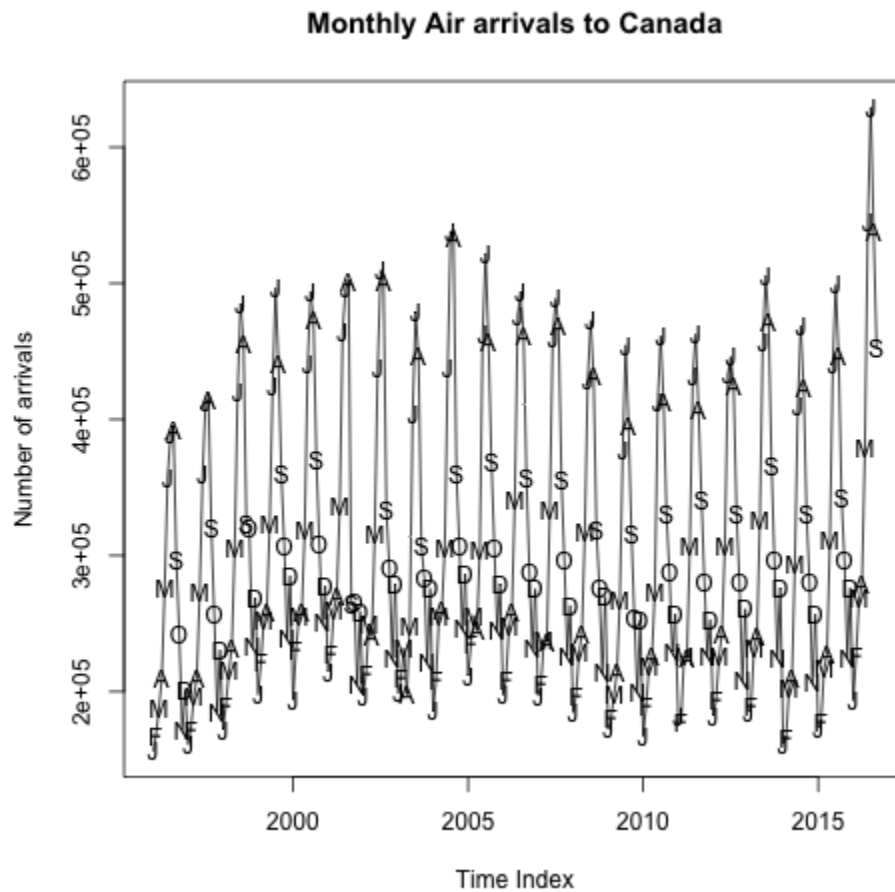
Introduction

The scientific question motivating my work is “is there a seasonal trend for U.S.citizens to travel to Canada by air?” Canada is one of the closest country across the border of the United States. Many U.S. citizen consider Canada a great spot to travel during holiday. In the West Coast, we neighbor near Vancouver and Victoria, while the east coast has Toronto, Montreal and Quebec.

Dataset

The dataset comes from the U.S. Department of Commerce, National Travel & Tourism Office. [NTTO Monthly Tourism Statistics] (<http://travel.trade.gov/research/monthly/departures/index.html>). The dataset contain U.S. outbound travel by world regions from Jan 1996 to Sep 2016. There are 249 monthly data points throughout these twenty years.

Exploratory Data Analysis



First, I plot the time series for the monthly air arrivals from U.S. to Canada. By examining the time series, the plot looks seasonal with high peak in June, July and August. Students usually travel during their summer break and this is the main drive of the increase in air travel in these months. There is also a smaller peak in between of each cycle.