Australian Medicare Program Analysis

Data Science Assessment – Coding Task

# Introduction

The file **PBS.csv** contains data of prescriptions for Australia’s Pharmaceutical Benefit Scheme (PBS) from July 1991 to June 2008. The PBS provides a subsidy for many pharmaceutical products sold in Australia, and the expenditure depends on what people purchase during the year. Prescriptions are classified according to various concession types and Anatomical Therapeutic Chemical (ATC) indexes.

# Data Description

Month – The month during which the data was collected.

Concession – Whether the patient is in a protected group, such as seniors/pensioners.

Type – Determines who pays. Co-payments are partially paid by the patient, while Safety Net is fully funded by the government above a certain amount paid by the patient during the year.

ATC1, ATC2 – The Anatomical Therapeutic Chemical (ATC) Classification of the prescribed drugs.

Cost – How much Medicare Australia paid in benefits for this category.

Scripts – How many prescriptions were filled under the PBS program.

# Task

Please conduct an exploratory analysis. Provide a working solution for forecasting the total **Cost** paid by Medicare Australia for the next **three** months. Make sure to evaluate multiple approaches.

# Links

[Pharmaceutical Benefits Scheme (PBS) | About the PBS](https://www.pbs.gov.au/info/about-the-pbs)

[Anatomical Therapeutic Chemical (ATC) Classification](https://www.who.int/tools/atc-ddd-toolkit/atc-classification)