

## Navigating Government Finance Statistics: Effortless Retrieval and Comparative Analysis through Data Science and Machine Learning

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**Abstract :** This paper presents a methodology and software application (App) designed to empower users in accessing, retrieving, and comparatively exploring data within the hierarchical network framework of the Government Finance Statistics (GFS) system. It explores the ease of navigating the GFS system and identifies the gaps filled by the new methodology and App. The GFS, embodies a complex Hierarchical Network Classification (HNC) structure, encapsulating institutional units, revenues, expenses, assets, liabilities, and economic activities. Navigating this structure demands specialized knowledge, experience, and skill, posing a significant challenge for effective analytics and fiscal policy decision-making. Many professionals encounter difficulties deciphering these classifications, hindering confident utilization of the system. This accessibility barrier obstructs a vast number of professionals, students, policymakers, and the public from leveraging the abundant data and information within the GFS. Leveraging R programming language, Data Science Analytics and Machine Learning, an efficient methodology enabling users to access, navigate, and conduct exploratory comparisons was developed. The machine learning Fiscal Analytics App (FLOWZZ) democratizes access to advanced analytics through its user-friendly interface, breaking down expertise barriers.

**Keywords :** data science, data wrangling, drilldown analytics, government finance statistics, hierarchical network classification, machine learning, web application.

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