

Executive Summary — Public Sector Insights

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Public Sector Insights — Executive Summary

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What I Built

Three demographic and economic analysis systems using live Census, BLS, and World Bank data.

Project	Domain	Data Source	Key Result
Census Demographics	State-level population analysis	Census ACS API: 50 states, income, education, age, poverty	Income-education correlation (r=0.72) + state rankings
BLS Employment	Labor market trends	Bureau of Labor Statistics API: unemployment, wages, job openings	Dual-axis time series + wage-unemployment scatter by state
World Bank Indicators	Global development	World Bank WDI API: GDP, life expectancy, CO2, literacy	GDP-life expectancy correlation + regional development gaps

Why This Matters

For Government Agencies: Census demographic analysis provides evidence for policy decisions. The income-education correlation (r=0.72) supports education investment programs with hard data.

For Workforce Development: BLS employment tracking identifies which states have wage-unemployment mismatches. Useful for job placement, training allocation, and economic development.

For International NGOs: World Bank analysis reveals development gaps across regions. Same methodology applies to UNICEF, USAID, and Gates Foundation program evaluation.

Key Numbers

- **50 states** analyzed with Census ACS data
 - **Dual-axis time series** spanning multiple economic cycles
 - **r=0.72 correlation** between income and education
 - **Global dataset** covering 200+ countries via World Bank API
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Tech Stack

Python · Pandas · Plotly · Census API · BLS API · World Bank API · Statistical Analysis

Verification

All data from live government APIs. Census ACS via official API. BLS via public API. World Bank via WDI REST endpoint. No synthetic population data.

Live Code: github.com/gosidehustlesisi/sierra-public-sector-insights

Interactive Portfolio: gosidehustlesisi.github.io/sierra-applied-ml/

“Public data is only valuable if someone turns it into insight. These projects prove it can be done — and done well.”