## **Project Overview – MCAS Score Analysis**

**Summary**The MCAS Score Analysis project is a comprehensive examination of Grade 10 standardized test performance in Massachusetts from 2019–2024. This work combines cleaned MCAS data with district-level enrollment characteristics to identify drivers of average scaled scores across subjects and districts.

**Purpose**To understand score variation across time and geography, this project applies data wrangling, statistical modeling, and exploratory analysis to education data. It demonstrates how public K–12 data can be structured and analyzed to surface performance gaps and potential predictors of academic outcomes.

**Tools Used**

* **Python** (Jupyter/Colab-compatible)
* **pandas, seaborn, matplotlib, scikit-learn**
* **Google Drive** for storage
* **geopandas** and **folium** for optional mapping

**Folder Structure**

* Code & Notebooks/ – Main analysis notebook
* Data Files/ – All cleaned and raw data used in analysis
* Visuals & Reports/ – Saved figures and output charts
* README – Usage instructions and example queries
* Project Overview – Project summary and documentation

**Dataset Outputs**

* MCAS scaled scores by district and subject (2019–2024)
* Enrollment and demographic features matched by year
* Cleaned, imputed dataset with 2,700+ rows
* Linear and Random Forest model outputs with feature importance

**Future Additions**

* Interactive dashboards (Tableau or Folium)
* Deeper geographic patterning and overlays
* Incorporation of additional policy or financial indicators

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