

University Academic Performance Dashboard

Team Setup & Execution Guide

1. Project Overview

This project is a Streamlit-based Academic Performance Dashboard built for academic managers to monitor instructor performance across multiple campuses, halls, and subjects. The dashboard replaces manual Excel tracking with Power BI-style visual analytics and an optional AI assistant.

2. System Requirements

- 1 Operating System: Windows / macOS / Linux
- 2 Python Version: 3.9 or higher
- 3 Internet connection (only required for AI assistant)
- 4 Excel input file (.xlsx or .csv)

3. Project Setup Instructions

- 1 Install Python from <https://www.python.org> and ensure 'Add Python to PATH' is enabled.
- 2 Open Command Prompt (Windows) or Terminal (macOS/Linux).
- 3 Navigate to the project directory using the `cd` command.
- 4 Create a virtual environment: **`python -m venv venv`**
- 5 Activate the virtual environment:
 - 6 • Windows: **`venv\Scripts\activate`**
 - 7 • macOS/Linux: **`source venv/bin/activate`**
- 8 Install dependencies: **`pip install streamlit pandas plotly openpyxl requests`**

4. Command to Run the Application (IMPORTANT)

Once setup is complete, run the dashboard using the following command:

`streamlit run app.py`

After executing this command, Streamlit will start a local server and automatically open the dashboard in your default web browser.

5. Using the Dashboard

- 1 Upload the academic Excel file when prompted.
- 2 Use sidebar filters to select Campus, Instructor, Hall, or Subject.
- 3 View overall and filtered KPIs at the top of the dashboard.
- 4 Drill down into instructor or course performance.

- 5 Paste the Groq API key (optional) to enable AI-based insights.

6. AI Assistant Configuration

The AI assistant provides natural language summaries based on the selected campus, instructor, or course. To enable it, paste a valid Groq API key in the sidebar. The AI only receives aggregated metrics, not raw Excel data.

7. Common Errors & Troubleshooting

- 1 Command 'streamlit' not found → Activate the virtual environment and reinstall Streamlit.
- 2 Dashboard not opening → Manually open the local URL shown in the terminal.
- 3 Excel file not loading → Verify file format and required columns.
- 4 No data shown → Check applied filters.
- 5 AI assistant not responding → Verify internet access and API key validity.
- 6 ModuleNotFoundError → Install missing packages using pip.

8. Best Practices for Team

- 1 Do not hardcode file paths or API keys.
- 2 Validate Excel data before uploading.
- 3 Use Git for version control.
- 4 Test with multiple campuses and instructors before demos.
- 5 Keep dependencies documented in requirements.txt.

This document is intended for internal team onboarding, setup, and execution of the University Academic Performance Dashboard.