PRTG ANALYZER

# Project Overview

PRTG Analyzer is a Flask-based web application designed to fetch, analyze, and visualize monitoring data from PRTG Network Monitor. It allows users to input their PRTG server credentials, retrieves data from the API, performs statistical analysis, and returns multiple output formats including Excel, CSV, and graphical reports bundled in a downloadable ZIP file.

# Key Features

* • Web-based interface for data input
* • Data fetching from PRTG's JSON API
* • Descriptive statistical analysis of channel data
* • Excel and CSV export
* • Graphical visualization using matplotlib
* • ZIP packaging for convenient download

# Application Architecture

The application is structured into several functional components:  
  
1. Data Fetching: Utilizes Python's `requests` library to interact with the PRTG API.  
2. Data Analysis: Leverages `pandas` to process JSON data and compute statistical summaries.  
3. Visualization: Uses `matplotlib` to create bar graphs.  
4. File Output: Generates Excel, CSV, and image files.  
5. Packaging: Compresses output into a ZIP archive.  
6. Web Interface: Provides a styled HTML form for user input.

# Code Description

• `fetch\_prtg\_data()` - Sends an HTTP request to PRTG API and returns JSON data.  
• `analyze\_data()` - Converts JSON to pandas DataFrame and runs `.describe()`.  
• `save\_text\_results()` and `save\_csv()` - Save analysis as Excel and CSV.  
• `save\_graph()` - Plots and saves bar chart of the data.  
• `create\_zip()` - Bundles output files into a ZIP archive.  
• `index()` - Handles GET and POST requests; performs the full data processing cycle.

# User Interface Design

The HTML form accepts PRTG URL, username, and password. Basic CSS styles enhance readability and user experience. The form sends data via POST method to the backend for processing.

# Security Considerations

Currently, the password is transmitted as plain text. To improve security:  
• Use HTTPS  
• Implement form input sanitization  
• Consider encrypting credentials or using environment variables

# Running the Application

1. Run the Python script.  
2. Open your browser and go to `http://127.0.0.1:5000`.  
3. Enter your PRTG credentials and URL.  
4. Click 'Analyze Data'.  
5. Download the results ZIP file.

# Dependencies

* Flask
* Requests
* Pandas
* Matplotlib
* pdfkit (optional, currently not used)
* Zipfile
* os

# Conclusion

PRTG Anlyzer is a compact yet powerful tool that bridges the gap between network monitoring data and insightful visual reporting. It serves as a proof-of-concept for integrating monitoring tools with Python-based analytics and web frontends.

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