

# **Project Proposal**

## **System Status Display Application**

The "System Status Display" project aims to create a versatile desktop application that provides users with real-time graphical information about the performance and status of various system components in their computer. This application will be built using Python and the Tkinter GUI library for the user interface, and it will utilize the psutil library to collect and display system data.

## **Key Features**

The proposed features for the System Status Display application include:

- Overall System Overview: A dashboard that provides an overall snapshot of the system's health and resource usage.
- CPU Usage Monitor: A real-time graph displaying CPU usage as a percentage, along with the current CPU usage percentage.
- Memory Usage Monitor: A real-time graph illustrating memory (RAM) usage as a percentage, including details about total, used, and available memory.
- Network Activity Monitor: A real-time graph showing network activity in terms of bytes sent and received, allowing users to monitor network usage.
- Process Viewer: A section displaying the number of running processes on the system, providing insights into resource-hungry applications.
- Disk Usage Monitor: A real-time graph representing disk usage as a percentage for each available disk partition, along with tabulated data providing detailed information about each disk.
- Temperature Monitor: A module to display system temperature information, especially useful for systems with temperature-sensitive components.
- Battery Monitor (for laptops): A section that provides battery status and charge level for laptops.

## **Implementation**

- Tkinter: For building the graphical user interface (GUI).
- Matplotlib: For real-time graph plotting.
- psutil: For collecting system data, such as CPU usage, memory usage, disk information, etc.
- Tabulate: For formatting and displaying tabulated data.

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