Title : Serverless Computer Monitoring Dashboard with Python on Google Cloud Run

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Type of presentation* (choose 1):

- ☐ **Oral Presentation**
- ☑ **Poster**
- ☐ **Cooperative Education**

ABSTRACT

This independent study aims to develop a serverless web application dashboard for monitoring the status of computers within a network. The system is developed using Python and deployed on a cloud platform to provide real-time monitoring of computer status and network data transmission. The purpose of this system is to assist system administrators in effectively monitoring, analyzing, and managing network operations. The system categorizes users into two types: administrators and client machines.

The web application is developed using the FastAPI framework with Python as the primary programming language. The frontend interface is built using HTML, CSS, and JavaScript. PostgreSQL is used as the database management system for storing data, while the server-side system is hosted on a cloud platform. The development process is conducted using Visual Studio Code.

The results of the system development indicate that the system functions correctly. It is capable of collecting data from client machines through an agent program and displaying the information on a web-based dashboard. System administrators are able to monitor the status of both their own machines and client machines within the network. Additionally, the system enables administrators to efficiently manage and oversee the overall network system.