



AI DRIVEN WORKSPACE PROVISIONING FOR IAAS COMPUTE

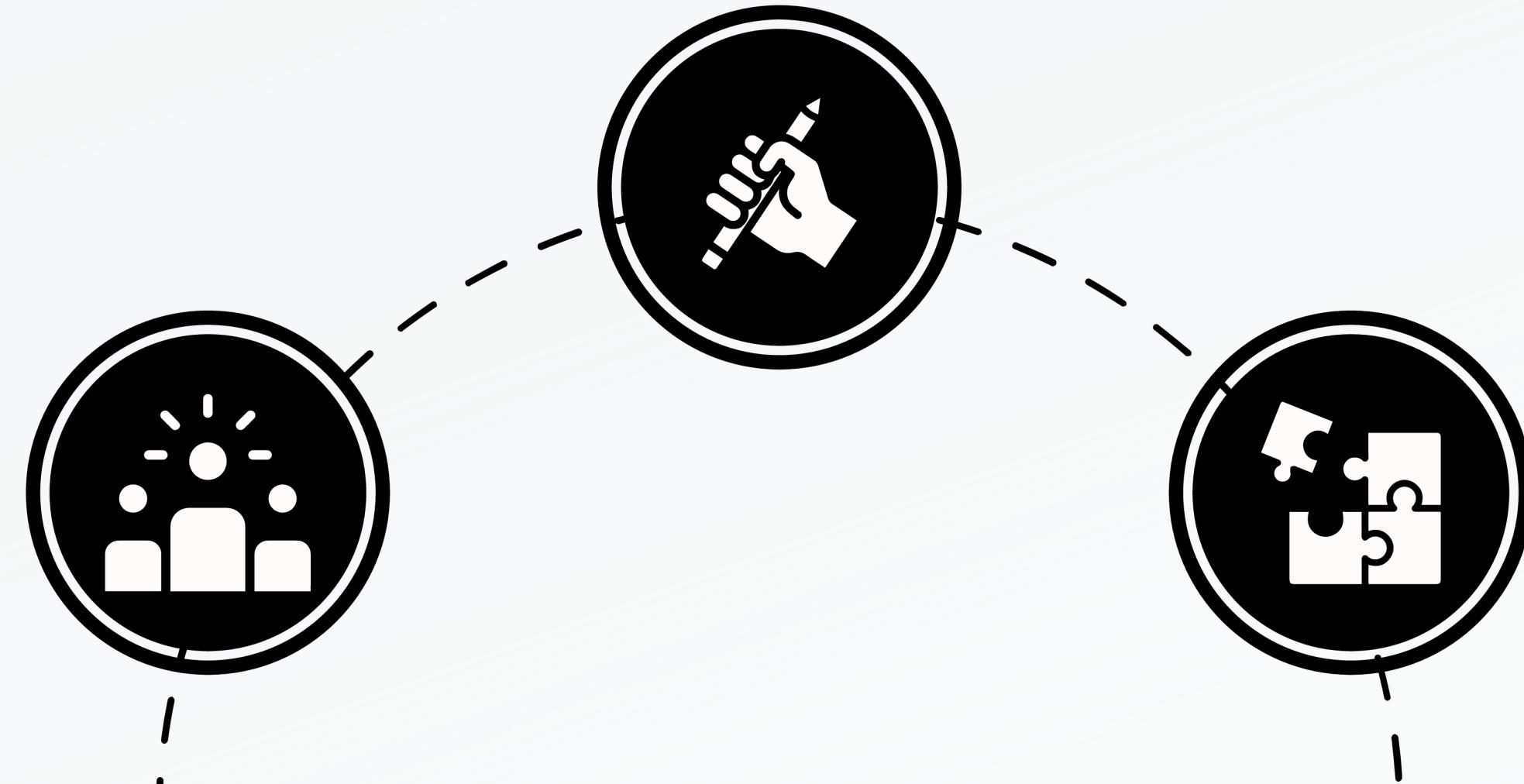
PROBLEM STATEMENT

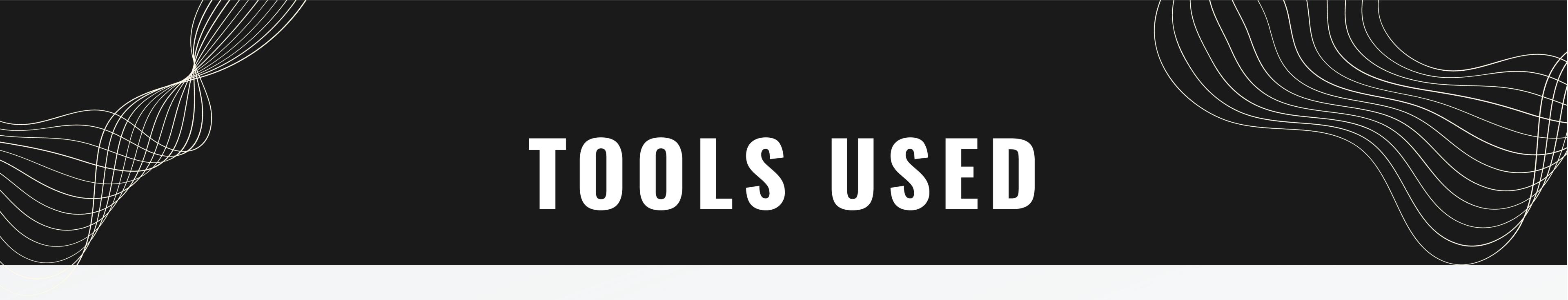
- PROVISIONING COMPUTE INFRASTRUCTURE (AZURE VMs, DATABRICKS CLUSTERS, AND AZURE KUBERNETES SERVICE [AKS]) IN AN ENTERPRISE ENVIRONMENT IS A COMPLEX TASK
- THAT MUST BALANCE SCALABILITY, SECURITY, AND WORKLOAD OPTIMIZATION.
- ENSURING THAT THESE ENVIRONMENTS ARE PROVISIONED SECURELY AND EFFICIENTLY REQUIRES AUTOMATED APPROACH.



OBJECTIVES

- Automate the provisioning of compute
- Use AI to Predict, Prescribe and Prevent resources in real-time.
- Enforce security policies and ensure compliance during the infrastructure setup process.
- Provide a user-friendly UI to manage provisioning and monitor the process.





TOOLS USED

- **TERRAFORM** IS AN OPEN-SOURCE TOOL THAT ALLOWS USERS TO BUILD, CHANGE, AND MANAGE INFRASTRUCTURE AS A CODE (IAAC)
- **FLASK** IS A PYTHON-BASED WEB APPLICATION FRAMEWORK THAT'S USED TO BUILD WEB APPS AND APIs
- **MICROSOFT AZURE** IS A PUBLIC CLOUD PLATFORM THAT ENABLES COMPUTING RESOURCES TO ACCESS OVER THE INTERNET
- **AI INTEGRATION:** USED GEMINI 1.5 PRO MODEL

APPROACH

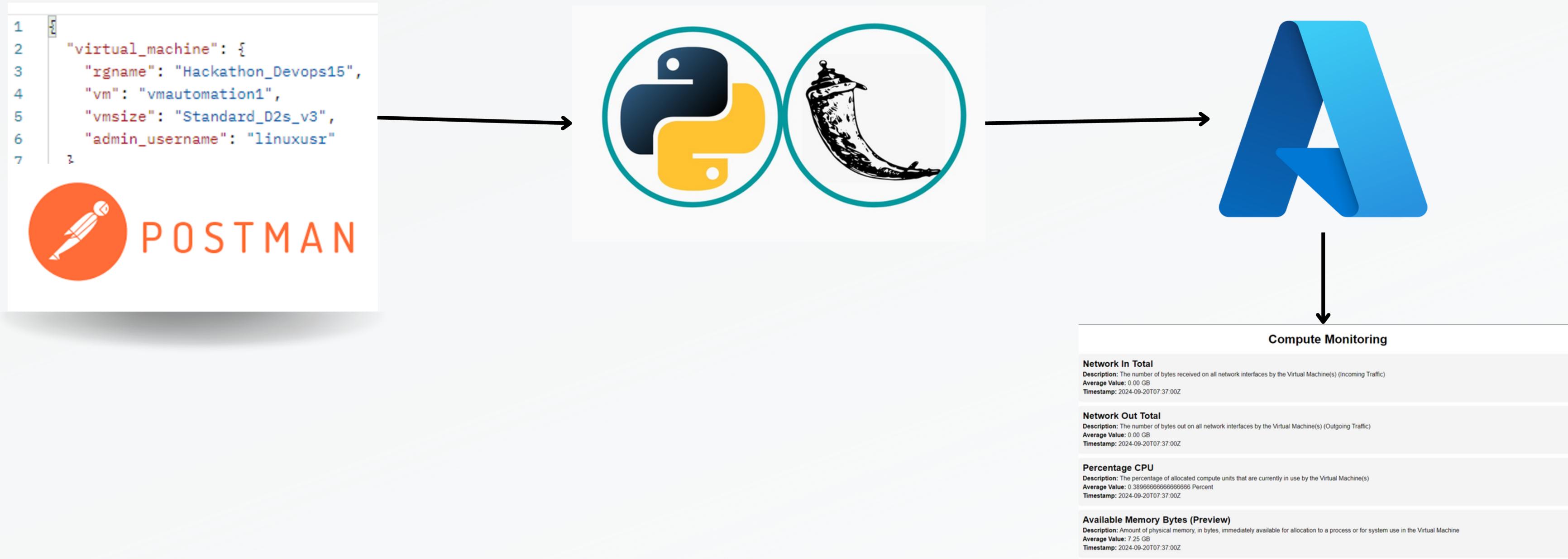
PHASE-1

HARDCODE THE VALUES



PHASE-2

AUTOMATION USING JSON PAYLOAD



PHASE-3

IMPLEMENTED USER INTERFACE AND AI

Provision Compute

Resource Group Name:
Hackathon_Devops5

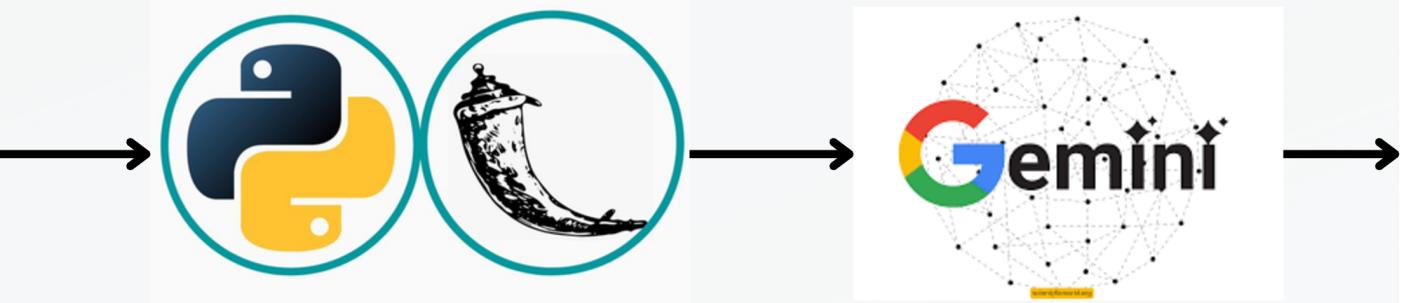
Virtual Machine Name:
llmvmtest

VM Size:
Standard_D2s_v3

Admin Username:
nithin

[Submit](#) [Destroy](#) [Monitor](#) [Predict](#) [Download PEM File](#)

Provisioning successful!



Compute Metrics Prediction

Metrics:

- CPU Usage: 0.15%
- Available Memory: 7.25 GB
- Network In: 41885 bytes
- Network Out: 55999 bytes

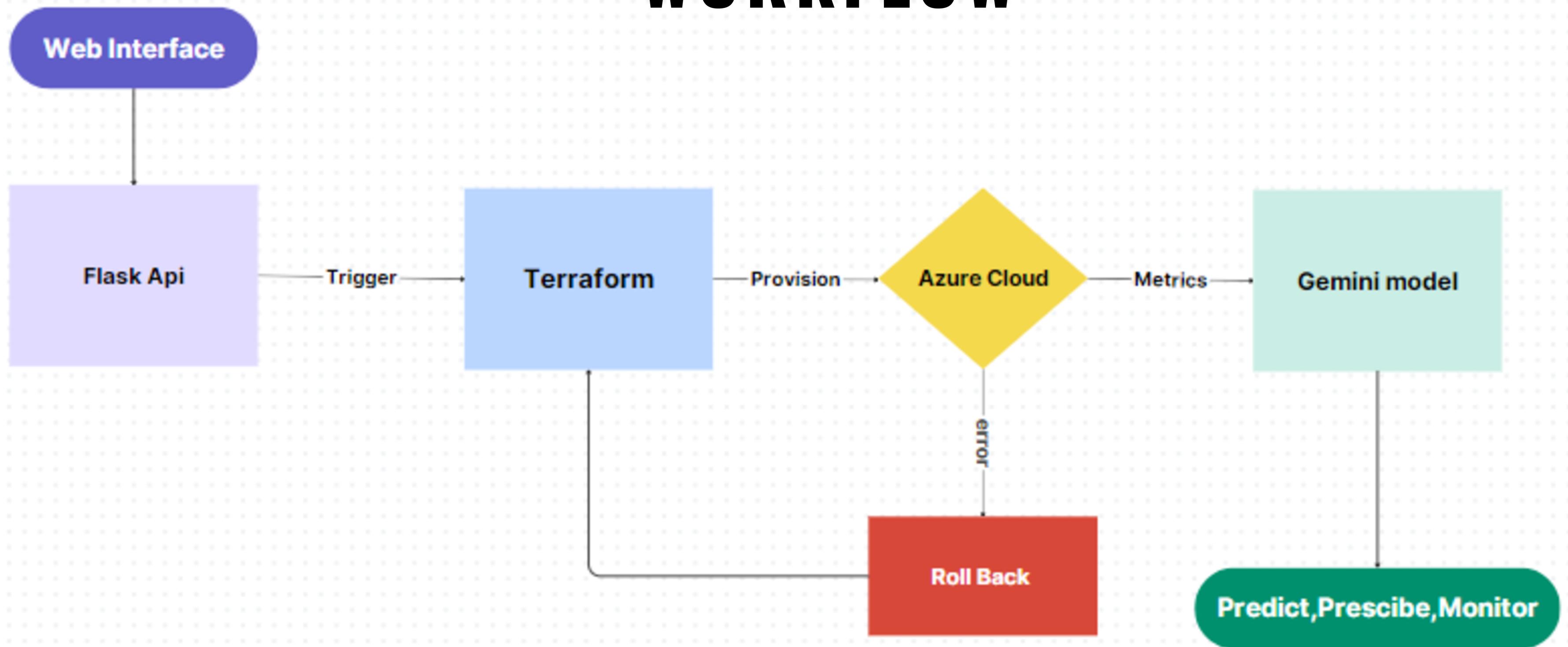
Analysis:

The VM appears to be severely underutilized. CPU usage is extremely low at 0.155%, suggesting a significant waste of resources. 7GB of memory remains available. This points towards a potential waste of resources and cost. Consider optimize resource utilization and reduce expenses.

Timestamp:
9/20/2024, 1:20:41 PM

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WORKFLOW



THANK YOU

