



School of Computing and Information Sciences

Fall 2024 Senior Design Project

STARS GPT

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INTRODUCTION

STARS GPT is an AI-driven tutoring chatbot designed to provide academic support using OpenAI's advanced LLM model. My contribution to the project focused on setting up the cloud infrastructure with AWS EC2, ensuring a secure, scalable, and reliable deployment environment for real-time interactions.



WHY AMAZON WEB SERVICES EC2?

AWS EC2 was chosen for its robust cloud computing capabilities, meeting the project's scalability, security, and cost-efficiency requirements.

RESEARCH

After researching various cloud computing platforms, AWS EC2 was considered the best fit for providing a secure and scalable infrastructure.



INTEGRATION

Our EC2 instance seamlessly integrates with OpenAI's APIs and Streamlit's interactive frontend.



SECURE

EC2 ensures encrypted communication between the server and developers, protecting sensitive data from unauthorized access using SSH protocols.

CONCLUSION

Choosing AWS EC2 for its scalability and robust infrastructure proved to be the best alternative, offering a secure and efficient environment for this project.



ACHIEVEMENTS

- Successfully configured a secure and scalable AWS EC2 instance for real-time AI applications.
- Implemented secure SSH protocols to protect data during transmission.
- Overcame deployment challenges, including key management and instance initialization delays.

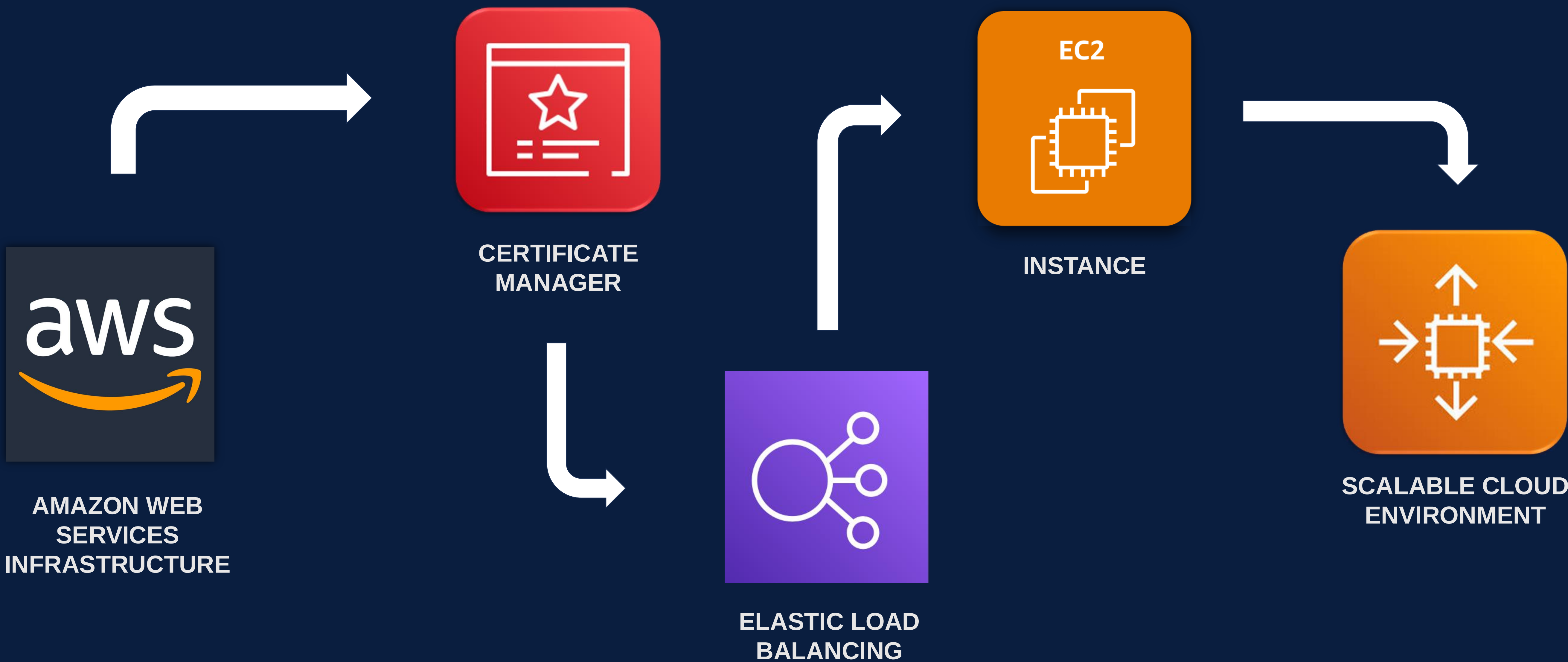


Image Credits: AWS (aws.amazon.com), Streamlit (streamlit.io), OpenAI (platform.openai.com).

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