
 Marwadi University Marwadi Chandarana Group 	Marwadi University Faculty of Engineering & Technology Department of Information and Communication Technology	
Subject: Capstone	Aim: Deployment and Operations	
Submission - 6	Date:	Enrollment No: 92200133044

Deployment and Operations

1. Deployment Process

The project was deployed beyond localhost to a live environment so that it can be accessed by users directly. For deployment, a cloud-based platform was selected because it provides scalability, reliability, and remote access.

Steps followed during deployment:

1. Prepared the project files and database.
2. Configured the server environment with required libraries and dependencies.
3. Set up domain and hosting for remote access.
4. Uploaded the project and verified successful deployment.

Evidence of Deployment:

- URL of deployed system: [<https://voicelens.streamlit.app/>]
- Screenshot showing the project running in the live environment.

Challenges faced during deployment included configuring dependencies and managing database connections. These were solved by adjusting server settings and using proper environment variables.

2. Monitoring Strategy



After deployment, monitoring was set up to check system performance and health. Monitoring helps in identifying issues early and keeping the system reliable.

Three key performance indicators were selected:

- **Response Time:** To check how fast the system replies to user requests.
- **Uptime:** To ensure the system is available all the time.
- **Error Rate:** To measure failures or crashes.

Tools used:

- Cloud-native monitoring dashboard.
- Logs from the server to track errors.
- Graphical reports for performance trends.

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3. Maintenance Plan

To keep the system stable and reliable in the long term, a maintenance plan was prepared. The plan includes:

- **Weekly Backups:** Regular backup of database and files.
- **Monthly Security Updates:** Apply security patches and updates to dependencies.
- **Bug Fixes:** Track and resolve issues reported by users.
- **Scalability Planning:** Monitor usage and upgrade server resources when required.

4. Challenges

Some challenges faced during deployment and operations were:

- Difficulty in configuring server environment.
- Managing dependencies for audio processing libraries.
- Ensuring database connection works properly on the live platform.

These were resolved by step-by-step testing, checking compatibility, and adjusting server settings.

5. Conclusion

The project was successfully deployed in a live environment, monitored using standard tools, and a proper maintenance plan was prepared. This ensures that the system is reliable, scalable, and ready for long-term use.