NAAN MUDHALVAN PROJECT

PENGUIN CLASSIFICATION ANALYSIS

Team ID: NM2023TMID19767

Team Size : 5

TEAM DETAILS

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Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	06 May 2023
Team ID	NM2023TMID19767
Project Name	THE PENGUIN CLASSIFICATION ANALYSIS

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Web Accessing	Accessing via chrome Accessing via MS Edge
FR-4	Generating your details	Generating via PDF Generating via DOC

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Our aim was to estimate the population of emperor penguins (*Aptenodytes fosteri*) using a single

		synoptic survey. We examined the whole continental coastline of Antarctica using a combination of medium resolution and Very High Resolution (VHR) satellite imagery to identify emperor penguin colony locations
NFR-2	**Security**	Security is a critical aspect of any software or system, including the penguin classification analysis project. Here are some considerations for ensuring security in the project • Data Protection • Secure Authentication and Authorization • Data Privacy and Confidentiality • Secure Data Transmission
NFR-3	**Reliability**	Reliability is a crucial aspect of the penguin classification analysis project, ensuring that the system consistently performs its intended functions accurately and without disruptions. Here are some considerations for ensuring reliability in the project: • Continuous Monitoring and Diagnostics • Scalability • Performance Optimization • Fault Tolerance and Redundancy • Error Handling and Exception Management
NFR-4	**Performance**	Performance is a critical aspect of the penguin classification analysis project to ensure efficient and timely analysis of data. Here are some considerations for optimizing performance in the project: • Efficient Data Processing • Caching and Memory Optimization • Algorithm Selection and Optimization • Hardware and Infrastructure Considerations • Indexing and Data Retrieval • Data Preprocessing Optimization
NFR-5	**Availability**	Availability is an important aspect of the penguin classification analysis project, ensuring that the system is accessible and operational whenever users need to perform analysis tasks. Here are some considerations for ensuring availability in the project: • Redundancy and Failover • Scalable Architecture • Monitoring and Alerting • Planned Downtime and Maintenance • Disaster Recovery and Backup
NFR-6	**Scalability**	Scalability is an important consideration for the penguin classification analysis project to ensure that the system can handle increasing workloads, growing datasets, and a larger user base. Here are

		some considerations for achieving scalability in the project: • Horizontal Scaling • Database and Storage Scalability • Elastic Resource Provisioning • Message Queuing and Asynchronous Processing • Data Partitioning and Sharding • Cloud Computing