

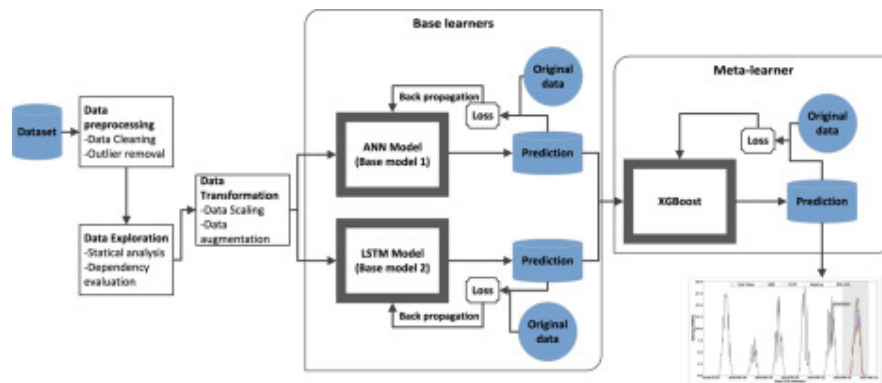
Project Design Phase- IITechnologyStack (Architecture &Stack)

Date	10oct2023
TeamID	85555168A5DB7B6B4584918BDF691CFF
ProjectName	Solar Panel Forecasting

Technical Architecture:

The Deliverables shall include the architectural diagrams below and the information as per the table 1 & table 2

Example: Solar Panel Forecasting



Guidelines

Include all the processes (As an application logic/Technology Block)
Provide infrastructural demarcation (Local/Cloud) Indicate external interfaces (third party API's etc.) Indicate Data Storage components / services Indicate interface to machine learning models (if applicable)

Table-1: Components&Technologies:

S.No	Component	Description	Technology
1.	UserInterface	How user interacts with application e.g. WebUI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / ReactJsetc.
2.	Search andDataAggregation	theprocessofgatheringandorganizinginf ormationfromvariousources	GraphQL,JSON or XMLparsers,andredis
3.	Dataprocessing andStorage	Efficienthandlingandorganizationofinformation	MySQL,Oracle,NoSQL and ApacheSpark
4.	CloudDatabase	DatabaseServiceonCloud	IBMDB2,IBMCloudantetc
5.	CMS	CMSsoftwareplatformthat allowsuserstocreate,organize, and manage digital content for websitesor otheronline applications.	WordPess,Drupal,(CDN)- Akamai,Cloudflare
6.	FileStorage	Filestoragerequirements	IBMBlock StorageorOtherStorageServiceorLo calFilesystem
7.	User ManagementandAuthentication	Seamlessly control user access and verifyidentitiesfor securecontentinteractions."	OpenIDConnect,JWT,bcrypt orArgon2
8.	Analyticsandreporting	Analytics and reporting involve extracting insightsfromdatatodriveinformeddecision-making.	Google analytics,mixpanel,d3.js orchart.js
9.	ExternalAPIs	ExternalAPIs usedinthe application	RESTorSOAPprotocols.
10.	InfrastructureandScalability	Application Deployment on Local System / CloudLocalServerConfiguration: CloudServerConfiguration:	AWS,GCP,Microsoftazure,Kubernetes Nginx,HAProxy.

Table-2:ApplicationCharacteristics:

S.No	Characteristics	Description	Technology
1.	Open-SourceFrameworks	Listtheopen-sourceframeworksused	TechnologyofOpensourceframework
2.	SecurityImplementations	Implement strong encryption algorithms to protectsensitivedata atrest	e.g. SHA-256, Encryptions, IAMControls,OWASP etc.

S.No	Characteristics	Description	Technology
3.	ScalableArchitecture	A scalable architecture allows the system to handle increased workloads or growing user demands without sacrificing performance.	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Architecture should be designed to optimize performance, aiming for efficient resource utilization and responsiveness	Technology used

References:

<https://stackoverflow.com/>

[https://www.reddit.com/r/datascience/?r
dt=57178](https://www.reddit.com/r/datascience/?rdt=57178)