Project Design Phase-
IProposedSolutionTemplate

Date	15.10.2022
Team ID	PNT2022TMID09878
ProjectName	DemandEst-AI powered FoodForecaster
MaximumMarks	2 Marks

ProposedSolutionTemplate:

Projectteamshallfillthefollowinginformationinproposedsolutiontemplate.

S.No.	Parameter	Description
1.	Problem Statement (Problem to besolved)	The ability to forecast consumer demand accurately is of great importance to companies in the consumer market. The food industry, in particular, views consumer availability as the cornerstone of their business. However, many companies concede that their forecasting process does not perform as well as they would wish. A group of forecasting and demand managers from some of the leading UK food companies, with the support of Leatherhead Food RA, examined the problems associated with their functions over an 18-month period. This paper presents the key findings from their collaborative work.
2.	Idea/Solutiondescription	Using AI, organisations can make use of Machine Learning algorithms to predict changes in consumer demand as accurately as possible. These algorithms can automatically recognise patterns, identify complicated relationships in large datasets and capture signals for demand fluctuation.. Demand forecasting is the process of using predictive analysis of historical data to estimate and predict customers' future demand for a product or service. Demand forecasting helps the business make better-informed supply decisions that estimate the total sales and revenue for a future period of time.
3.	Novelty/Uniqueness	A response to demand volatility is demand forecasting using Artificial Intelligence. Traditionally, demand forecasting is a form of predictive analytics, where the process of estimating customer demand is analysed using historical data (Dilmegani, 2021). Using AI, organisations can make use of Machine Learning algorithms to predict changes in consumer demand as accurately as possible. These algorithms can automatically recognise patterns, identify complicated relationships in large datasets and capture signals for demand fluctuation. See figure 1 for a side-by-side comparison between traditional forecasting and ML forecasting.Typically, organisations use this form of AI to avoid inefficiencies caused by misalignment of demand and supply throughout the operational process.

| | | Honestly, this will never be 100% accurate (Alexsoft, 2019). Yet it can offer companies the opportunity to significantly reduce supply chain costs and make improvements in financial planning, workforce planning, profit margins and risk assessment decisions |

4.	SocialImpact/ CustomerSatisfaction	Gas detection sensors are most commonly usedto develop an IoT-powered system and identifythe variation of toxic gases around an industrialfacility. It helps benefit the factories andrefineries by keeping them safe against anyunexpected threats like explosions.Get realtime alerts about the gaseous presence in theatmosphere. It prevent hazards and explosions.With the product of this idea helps to ensureworkers health. An IoT powered gas monitoringsolution works through sensors that providesaccurate data regarding the presence of toxicgases in the atmosphere. It is a very usefulsystem to implement in the industries or plantfacilities to avoid catastrophic explosions. Withthe help of a gas monitoring solution, you cansuccessfully measure temperature and humidityin the atmosphere, which results in improvedplantfacilitiesandensuresemployee safety.
5.	Business Model(RevenueModel)	gas leakage is detectable one. gas is aexplosionable one that's why it requires morecareful when handing it. LPG is a highlycombustible substance and quickly formsexplosive air- hydrocarbon mixture whensuspected to atmospheric condition. Liquidleakages that may from in LPG systems cancreate combustible and explosive gas mixturesin large volumes forms 250 unit. gas leakagedetector provides a profit stability to the peoplewho are having it. Because cost wise it becomesto low price in market even poor peoples canalso using this easy manner.Inhaling LPG vaporat high concentration even for a short time cancause fainting and death. Inhaling in nose andthroat, headache and nausea, vomiting,dizziness and loss of consciousness. LPG vapourcan cause fainting and choking in closed orpoorlyventilated environments.
6.	ScalabilityoftheSolution	Its ability to warn its stakeholders about theleakage of the LPG gas. The future aspects of thisdetector include the GSM module and a trippercircuit which increases the efficiency of thesystemandprovidesmoresafetyto theusers. This detector is implemented successfully and iseasy to use and also a low cost product. Anotheradvantage of this device is that even though if noone is there in the house and then gas leaksoccurs, GSM module is there to send immediatemessages to the stakeholders regarding the gasleak and thus it lowers the intensity of accidents.GSM module in this device ensures better safetyregardingthegas leaks.