

Project Initialization and Planning Phase

Date	15 October 2024
Team ID	740663
Project Name	Predicting Diamond Prices With ANN Using DeepLearning
Maximum Marks	3 Marks

Define Problem Statements (Customer Problem Statement Template):

In the diamond industry, accurately determining the price of a diamond is critical for buyers, sellers, appraisers. Diamond prices are influenced by multiple factors, including the 4Cs: **Carat**, **Cut**, **Colour**, and **Clarity**, as well as other attributes like **dimensions** and **fluorescence**. Pricing inconsistencies can lead to mistrust in the market, revenue loss, and customer dissatisfaction.

The goal is to develop a machine learning model to accurately predict diamond prices based on features like **carat**, **cut**, **colour**, **clarity**, and **dimensions**. This will help buyers and sellers ensure fair pricing, improve market transparency, and automate valuation processes.

Example:

I am	I'm trying to	But	Because	Which makes me feel
I am Individuals or businesses (e.g., jewelers, investors, or buyers) involved in purchasing diamonds.	I'm trying to Determine the fair market price of a diamond based on its characteristics (e.g., carat, cut, clarity, color).	But Diamond pricing is complex, with multiple influencing factors and a lack of transparency in the valuation process.	Because Prices depend on a combination of subjective assessments (e.g., cut quality) and objective factors (e.g., carat weight), making it challenging to get consistent and accurate pricing.	Which makes me feel Confused and uncertain about whether I'm paying a fair price or getting a good deal.

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Individuals or businesses (e.g., jewelers, investors, or buyers) involved in	Determine the fair market price of a diamond based on its characteristics (e.g., carat, cut, clarity, color).	Diamond pricing is complex, with multiple influencing factors and a lack of transparency in the	Prices depend on a combination of subjective assessments making it challenging to get consistent and	Confused and uncertain about whether I'm paying a fair price or getting a good deal.

	purchasing diamonds.		valuation process.	accurate pricing.	
PS-2	Retailers or e-commerce platforms selling diamonds to end customers.	Offer competitive and transparent pricing for diamonds to attract and retain customers.	The pricing process is highly variable and depends on many factors that are hard to standardize.	There's no universally accepted tool or model to accurately predict diamond prices based on all relevant attributes.	Frustrated and at risk of losing customers due to inconsistent or uncompetitive pricing.