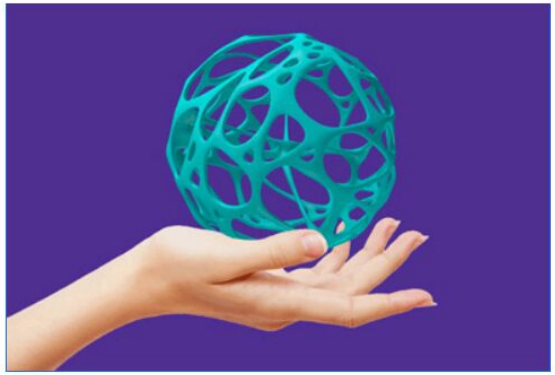
HOME PREDICT

3D Printer Material Prediction

The 3D printing materials industry is increasing due to the rise in the demand from healthcare, automotive, and other industries, globally.The 3D printing materials market comprises several stakeholders, such as raw material suppliers, processors, end-product manufacturers, and regulatory organizations in the supply chain. The demand side of this market is characterized by the development of various industries such as aerospace & defense, healthcare, consumer goods, and automotive. Advancements in technology and diverse applications characterize the supply side. Various primary sources from both the supply and demand sides of the market were interviewed to obtain qualitative and quantitative information.

About the Project

Predicting material would be more suitable for making the 3D model. In this project the input parameters are like Layer Height (mm),Wall Thickness (mm), Infill Density (%),Infill Pattern (honey comb, grid),Nozzle Temperature (C°),Bed Temperature (C°), Print Speed(mm/s),Fan Speed (%), Roughness (µm),Tension (ultimate), Strength (MPa),Elongation (%).



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A Machine Learning Flask Application

Layer Height(range 0.02-0.2)

0.2

Wall Thickness(range 1-12)

5

Infill Density(range 10-100)

43

Infill Pattern: 0 for grid, 1 for honeycomb

0

Nozzel Temperature(range 200-250)

234

Bed Temperature(range 60-100)

70

Pirnt Speed(range 40-120)

60

Fan Speed(range 0-100)

56

Fan Speed(range 0-100)

56

Roughness(range 25-369)

67

Tension Strength(range 5-40)

34

Elongation(0.95-2.9)

1.5

Predict

Tension Strength(range 5-40)

Elongation(0.95-2.9)

Predict

The Suggested Material is ABS.(Acrylonitrile butadiene styrene is a common thermoplastic polymer typically used for injection molding applications)