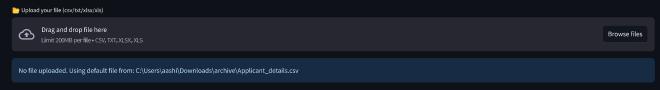
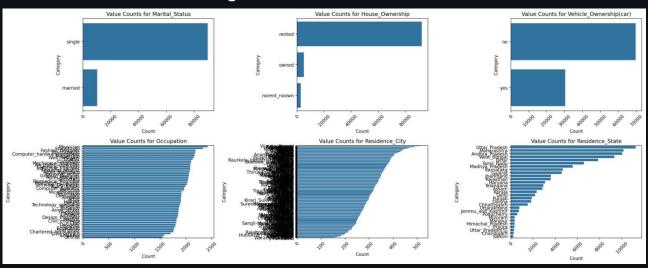
# **Applicant Data Dashboard**



### **Unique Values in Categorical Columns**

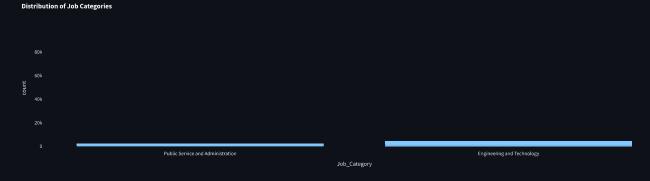


### **General Value Counts for Categorical Columns**



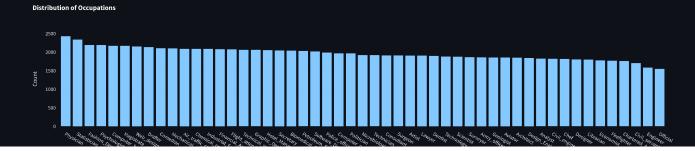
Interpretation: The above visuals show the distribution of categorical variables, providing insights into the diversity of applicant profiles.

### **Distribution of Job Categories**



Interpretation: This chart shows the distribution of applicants across different job categories.

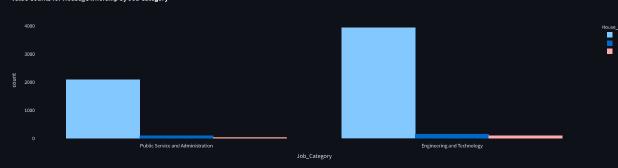
## **Occupation Distribution**



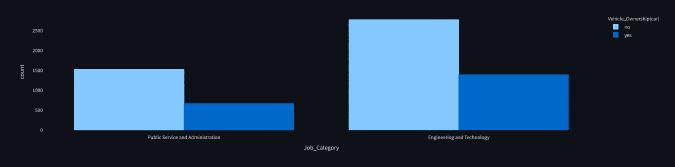
Interpretation: The above chart displays the number of applicants for each unique occupation.

### **Value Counts by Job Category**





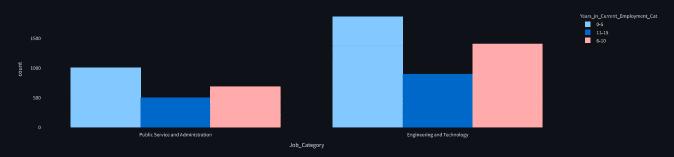
#### Value Counts for Vehicle\_Ownership(car) by Job Category



#### Value Counts for Work\_Experience\_Category by Job Category



#### Value Counts for Years\_in\_Current\_Employment\_Cat by Job Category



# Target Variable Distribution (Loan Default Risk)

### Distribution of Loan Default Risk





### **Correlation Heatmap**

Correlation Matrix

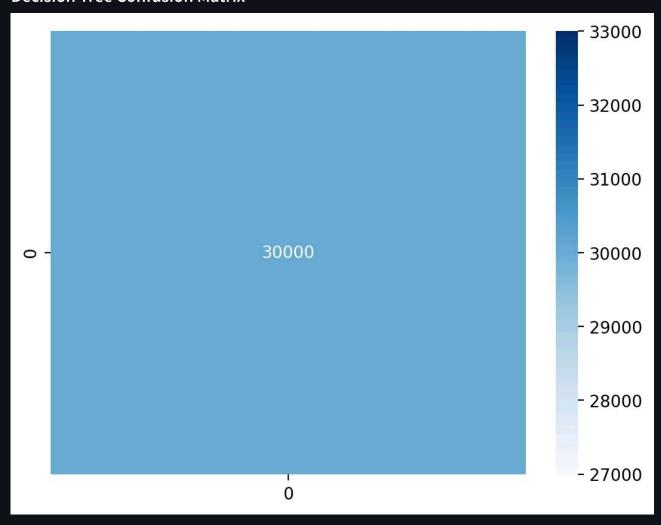


### **Loan Default Prediction with Decision Tree**

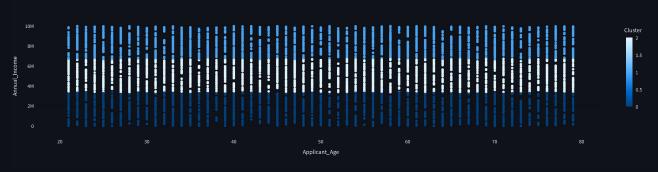
Decision Tree Classification Report:

precision	recati	. II-score	suppor		
		1.00	1.00	1.00	30000
accurac	су			1.00	30006
macro av	vg	1.00	1.00	1.00	30006
weighted a	vg	1.00	1.00	1.00	30006

## **Decision Tree Confusion Matrix**



#### KMeans Clustering: Applicant Segments



Interpretation: KMeans clustering segments applicants into distinct groups based on age and income.

### **Final Insights**

- $\bullet \quad \text{The decision tree classifier performed well in predicting loan default risk.}$
- KMeans clustering helps identify distinct applicant segments based on key numerical features.
- Outlier detection and correlation analysis provide further insights into the dataset.