



ANALYSIS ON LOAN APPLICANT

Data Visualization Project

Five Sheet Design

Intended Audience:

People with little knowledge on banking process , data analyst/scientist aspirants et.al.,

ABSTRACT:

Applying loan for immediate/essential financial needs is almost done by everyone. The only factor that varies is the reason and the amount required.

There are many factors that are involved in determining if the applicant is going repay the loan or not.

Through this analysis process, I have tried to find if there are any correlations which has impact on the loan defaulters.

AKSHAYA KUMAR

CHANDRASEKARAN

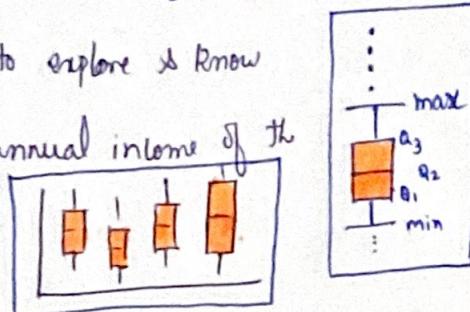
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IDEAS:-

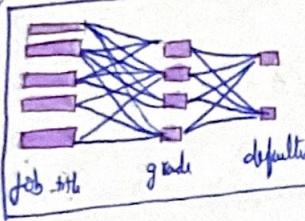
- * Choropleth map to find the number of applicants from different states across the country

- * Heat map for count of applicants from each state

- * Box plot to explore & know about the annual income of the applicants



- * Sankey diagram to for showing the job-title, grade and if they are a defaulter or not



- * Radial bar chart for purpose of loan

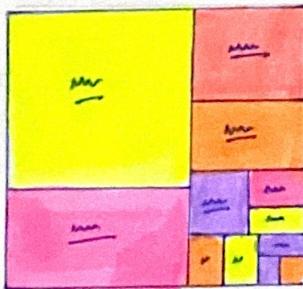
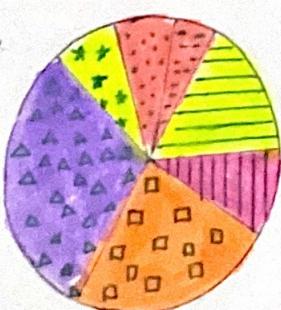
in each year.

- * SUNBURST CHART

- * Pie chart for purpose / job-title

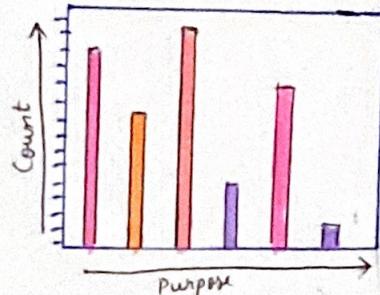
- * Tree map for purpose / job-title

- * Bar chart for employment length



- * word cloud for top- employee title and purpose

- * Bar chart for top employee title and purpose


FILTERS:-

- * Choropleth /heat map for number of applicants across state

- * Box plot to explore & know about annual income

- * Sankey diagram to show jobtitles, grade & defaulter relation

- * Radial bar chart for purpose of loan in each year

- * pie chart for purpose / job-title

- * tree map for purpose / job -title

- * Barchart for employment length, title and purpose

- * word cloud for top emp title and purpose

CATEGORY:-

- * Choropleth map

- * heat map * Sankey diagram

- * Box plot

- * pie chart for purpose

- * word cloud for emp.title

- * pie chart for job title

- * word cloud for purpose

- * tree map for purpose

- * Radial bar chart

- * tree map for job title

QUESTION:-

- * Impact of employment length on loan repayment

- * Impact of annual income on loan repayment

- * Impact of employee's application type on loan repayment

- * Impact of home ownership on loan repayment

SHEET-2

TITLE: ANALYSIS ON LOAN APPLICANTS

AUTHOR: AKSHAYA KUMAR CHANDRASEKARAN

DATE: 28-05-2020

TASK:

SHEET: 02

WEBPAGE DESIGN & PRESENTATION

AYOUT

PROJECT TITLE

IMAGE DESCRIPTION

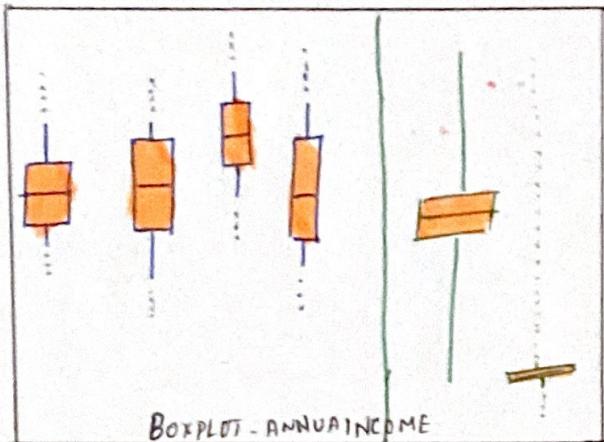
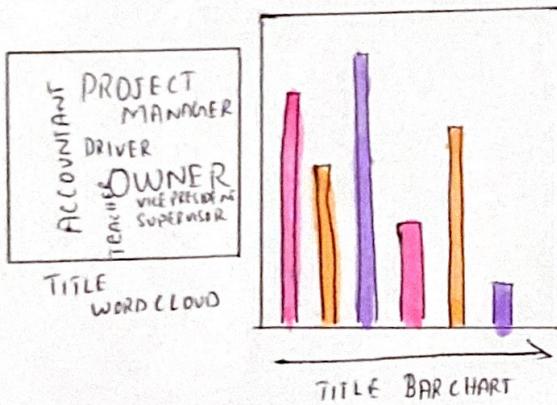
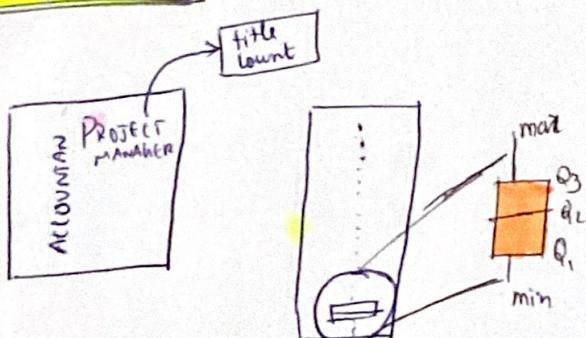


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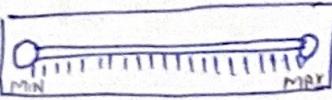


FOCUS / ZOOM



OPERATIONS

BOX PLOT :



Slider input

FULL
 <100K
 <20K

Radio input option

WORD CLOUD:

SELECT ▼
TOP 10 titles
TOP 15 titles
TOP 20 titles

drop down option.

DISCUSSIONS

ADVANTAGES (+)

- * Idea about the annual income and the five stats can be gained easily

- * Quick view on most employee title can be found out (also its frequency)

DISADVANTAGES (-)

- * No much interaction is there in word cloud.

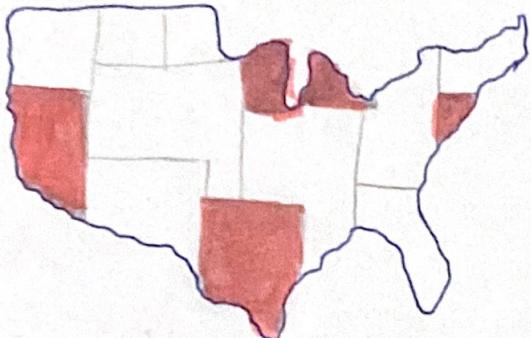
- * If there are too many outliers, boxplot will not be visible.

SHEET-3

TITLE: ANALYSIS ON LOAN APPLICANTS	
AUTHOR:- AKSHAYA KUMAR CHANDRASEKARAN	
DATE :- 28-05-2020	TASK: WEB PAGE DESIGN & PRESENTATION
SHEET: 03	

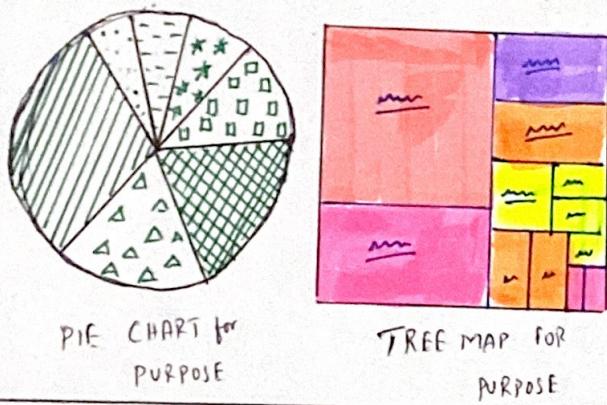
LAYOUT

PROJECT TITLE
IMAGE DESCRIPTION



CHOROPLETH MAP (DEFALTERS)

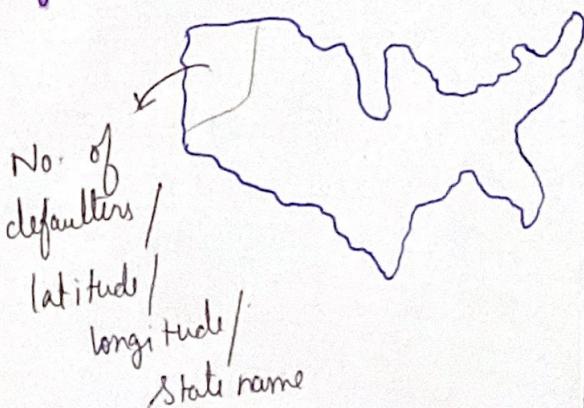
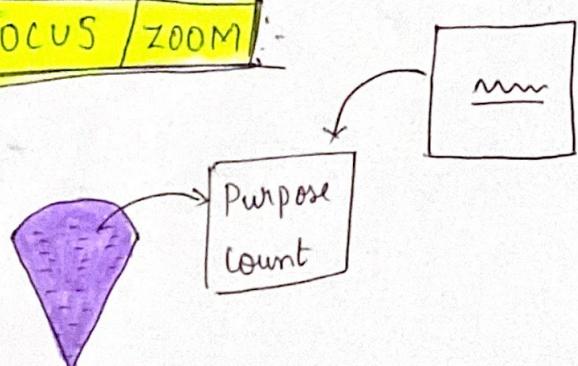
IMAGE DESCRIPTION



PIE CHART FOR PURPOSE

TREE MAP FOR PURPOSE

FOCUS / ZOOM



OPERATIONS

CHOROPLETH:-

BOTH
 0 0 0 1

Radio Button

PIE CHART:

DROP DOWN

Changing in Pie chart will reflect in Tree map also.

DISCUSSIONS:



- * Can get a depth knowledge on the behaviour of people across the states.
- * Majority of the purpose of loan can be easily interpreted.



- * If there are very few number count in a category in tree map it might not be shown.
- * If there are more no of categories, pie chart may not be the best form of representation.

SHEET - 4

TITLE: ANALYSIS ON LOAN APPLICANTS	
AUTHOR:	AKSHAYA KUMAR CHANDRASEKARAN
DATE:	28-05-2020
SHEET:	04
TASK:	WEB PAGE DESIGN & PRESENTATION

LAYOUT :-

PROJECT TITLE

IMAGE DESCRIPTION

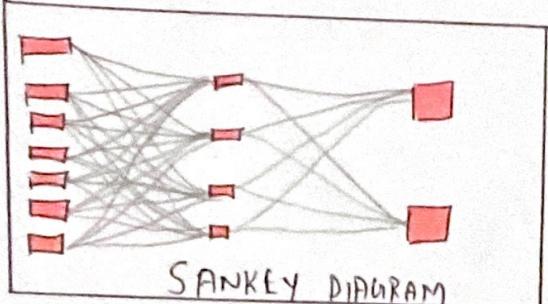
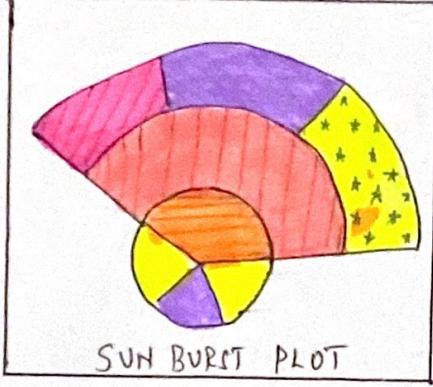
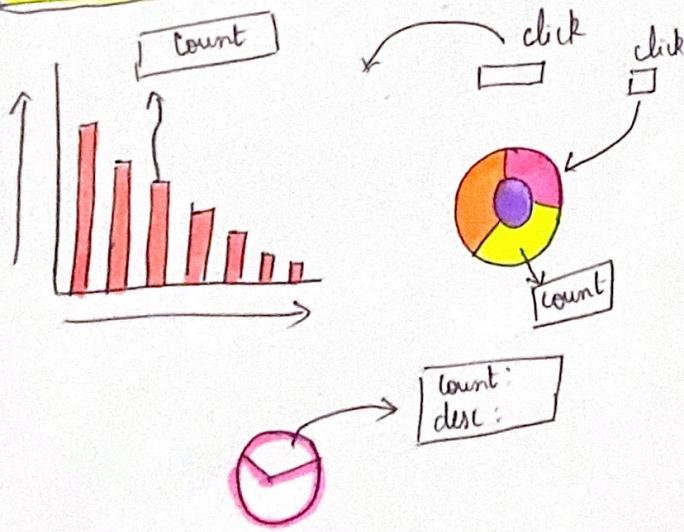


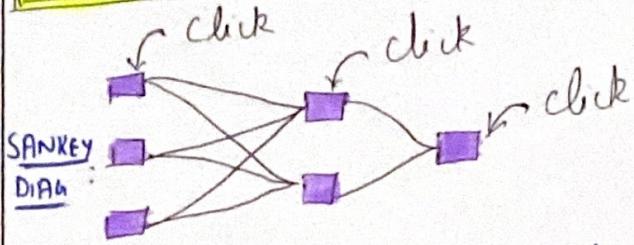
IMAGE DESCRIPTION



FOCUS / ZOOM :-



OPERATIONS :



clicking on Sankey diagram will give us a new bar/donut chart.

SUNBURST: choosing / clicking on a category further expands more data based on the category chosen

DISCUSSIONS

-ve

* Sankey diagram cannot be drawn for the entire data set. Only for Top 10 or Top 20 categories can be made compactly.

* If there is a lot of hierarchy, then sunburst would not be the best way of representation. Becomes a complicated process.

+ ve

* More user interactive and more info can be gained.

SHEET-5

TITLE: ANALYSIS ON LOAN APPLICANTS

AUTHOR: AKSHAYA KUMAR

CHANDRASEKARAN

DATE: 28-05-2020

TASK:

WEB PAGE

SHEET: 05

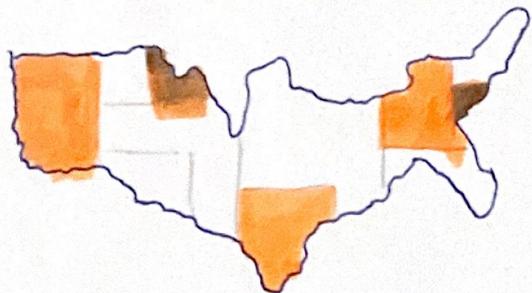
DESIGN

PRESERATION

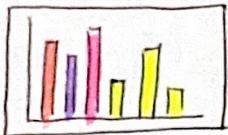
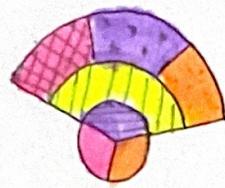
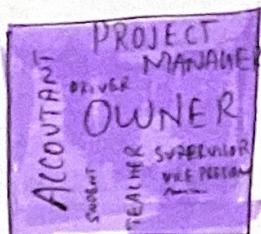
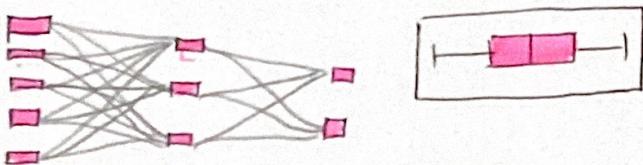
LAYOUT:-

—mm PROJECT TITLE—mm

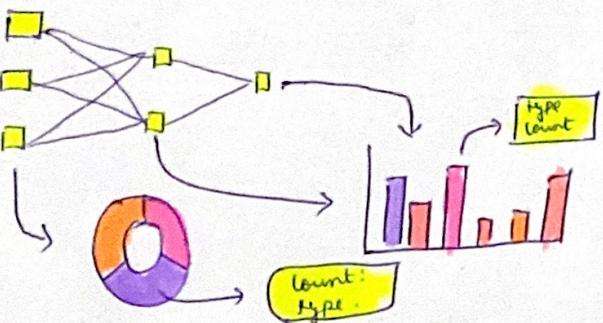
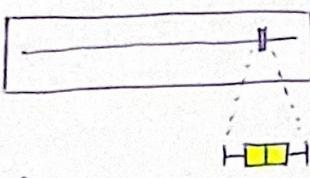
—mm IMAGE DESCRIPTION—mm



—mm IMAGE DESCRIPTION—mm



FOCUS/ZOOM



OPERATIONS

SANKEY DIAGRAM



(or)



WORD CLOUD



BOX PLOT



DETAILS

SOFTWARE ALLOWED

D3, R-studio

USED: R, R-studio and R packages

TYPE OF

REPRESENTATION: WEB-PAGE

TIME TO BUILD: 2 weeks

Choropleth map : 2 days

Bar graphs : 1 day

Word cloud : 2 days

Sunburst : 2 days

Sankey diagram: 3 days

EDA, integration and check : 4 days