Banking Customer Analysis – MongoDB

* Give marketing success rate (No. of people subscribed / total no. of entries)

db.customers.aggregate([

{

$facet: {

totalCount: [{ $count: "total" }],

subscribedCount: [

{ $match: { y: "yes" } },

{ $count: "subscribed" }

]

}

},

{

$project: {

totalCount: { $arrayElemAt: ["$totalCount.total", 0] },

subscribedCount: { $arrayElemAt: ["$subscribedCount.subscribed", 0] },

successRate: {

$divide: [

{ $arrayElemAt: ["$subscribedCount.subscribed", 0] } ,

{ $arrayElemAt: ["$totalCount.total", 0] }

]

}

}

}

])

or using Python

list(db.customers.aggregate([

{

"$facet": {

"totalCount": [{ "$count": "total" }],

"subscribedCount": [

{ "$match": { "y": "yes" } },

{ "$count": "subscribed" }

]

}

},

{

"$project": {

"totalCount": { "$arrayElemAt": ["$totalCount.total", 0] },

"subscribedCount": { "$arrayElemAt": ["$subscribedCount.subscribed", 0] },

"successRate": {

"$divide": [

{ "$arrayElemAt": ["$subscribedCount.subscribed", 0] } ,

{ "$arrayElemAt": ["$totalCount.total", 0] }

]

}

}

}

]))

* Give marketing failure rate

db.customers.aggregate([

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$facet: {

totalCount: [{ $count: "total" }],

subscribedCount: [

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{ $count: "subscribed" }

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{

$project: {

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{ "$arrayElemAt": ["$totalCount.total", 0] }

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}

}

}

]))

* Give the maximum, mean, median, minimum age of the average targeted customer.
* Check if age matters in marketing subscription for deposit

db.customers.aggregate([

{$match: {y:"yes"}},

{$group:{\_id:"$age",count:{$sum:1}}},

{$sort:{count:-1}}

])

* Check if marital status mattered for a subscription to deposit

db.customers.aggregate([

{$match: {y:"yes"}},

{$group:{\_id:"$marital",count:{$sum:1}}},

{$sort:{count:-1}}

])

* Check if age and marital status together mattered for a subscription to deposit scheme

db.customers.aggregate([

{$match: {y:"yes"}},

{$group:{\_id:{age:"$age",marital:"$marital"},count:{$sum:1}}},

{$sort:{count:-1}}

])

* Find All Records Where Housing Loan is Approved
* Find Records with High Account Balance
* Count Records by Job Type

db.customers.aggregate([

{$group:{\_id:"$job",count:{$sum:1}}},

{$sort:{count:-1}}

])

* Find total count of married Individuals with Secondary Education

db.customers.find({marital:"married",education:"secondary"}).count()

or

db.customers.aggregate([

{$match: {marital:"married",education:"secondary"}},

{$group:{\_id:{marital:"$marital",education:"$secondary"},count:{$sum:1}}},

{$sort:{count:-1}}

])

* Calculate the Average Balance for Each Job Type

db.customers.aggregate([

{$group:{\_id:"$job",average:{$avg:"$balance"}}},{$sort:{average:-1}}

])

* Find the Most Common Education Level Among Those with Loans

db.customers.aggregate([

{$match:{loan:"yes"}},

{$group:{\_id:"$education",count:{$sum:1}}},{$sort:{count:-1}},{$limit:1}

])

* Find Individuals with Multiple Campaign Contacts
* Determine the Success Rate of the Campaign
* Identify Anomalies in Account Balances
* Analyze Seasonal Patterns
* Determine Correlation Between Loan Status and Balance
* Identify the Most Common Day for Successful Campaigns
* Find the Youngest Person with the Highest Account Balance
* Identify Customers with Consistently Low Balances
* Analyze the Relationship Between Campaign Duration and Outcome
* Detect Loan Trends Among Different Job Categories
* Identify the Most Common Outcomes for Married Individuals
* Find the Distribution of Account Balances Across Different Education Levels
* How are account balances distributed among different education levels?
* Find ranking of Customers based on Account Balance.